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ORIGINAL LECTURES.

INFLUENCE OF ANTISEPTICS ON THE PERIODS OF AMPUTATION AFTER CRUSHING INJURIES.

A CLINICAL LECTURE.

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GENTLEMEN: The boy, about to submit to amputation of the leg, entered the hospital four days since suffering from a crushing wound of the leg, received by the wheel of a street car. The statement of the boy, and of the bystanders, was that the wheel traversed the leg just above the ankle, and an examination proves that they are correct. The limb was completely crushed in all its tissues at that point. But it must be remembered that it is usual for persons falling before a car wheel, and receiving injuries, to suppose that the wheel passed over the limb, when, in fact, this rarely happens. Such persons are greatly excited and severely injured, and naturally have the impression that the wheel passed over rather than by the side of the injured part. The truth is, however, that the wheel usually pushes the limb before it, and crushes and lacerates its side and fractures the bones. You can determine the nature of the injury by examination. If the wheel has actually traversed the limb, it will be, as in this case, so thoroughly crushed that bones are comminuted, muscles reduced to a pulp, and arteries, veins, and nerves destroyed. The entire destruction of a limb when a car wheel passes over it on a rail, may be tested by experiment with the dead subject. In such test you will find it somewhat difficult to make a car wheel mount over the limb; the tendency is to push the limb along on the track, and crowd it off upon one side. In this act the side of the limb will be lacerated and the bones broken, but the muscles, nerves, and arteries may be uninjured on the opposite side.

When called to a case of injury by the crushing effects of a car wheel, you should first examine to determine whether or not the wheel traversed the limb. If you are satisfied that it did pass directly over it, the limb cannot be saved; amputation is inevitable. If, however, you decide that the limb was pushed off the rail by the wheel, the question of amputation will be more or less doubtful, according to the nature and extent of the injury. In our time we can save limbs that surgeons formerly would not hesitate to amputate. As a rule, if the arteries and nerves are still intact, the limb can be saved. Disinfectants and plaster of Paris, judiciously used, will save the most unpromising cases of this kind.

But the question which chiefly interests us in connection with this case is this: Why was the operation, when amputation was, from the first, inevitable, delayed to this critical period? It will be a sufficient answer to that question to state that the patient is in better condition for the operation to-day than he has been at any time since the injury was received. In explaining this statement, I wish to emphasize the fact that antiseptics, efficiently employed in these cases, greatly modify our procedures. When it was decided that the injury necessarily involved the loss of the limb, the patient was profoundly under the influence of the shock of the injury. His surface was pallid, his pulse small and rapid, his respirations hurried; he was restless, and large

drops of sweat stood on his forehead. The first indication was, therefore, to restore him from the shock, which threatened life immediately. Stimulants, dry friction, and external heat were employed. The second indication was to dress the limb. The appliances used were these, viz.: The limb was laid on a rubber cloth, placed on pillows, and so arranged as to make a trough, which inclined downwards towards and beyond the foot of the bed. Above the limb a bottle was suspended, containing a three per cent. solution of carbolic acid, from which common candle wicking depended; the wicking was so arranged that the carbolized water constantly fell on the entire crushed wound, and the water ran off into a vessel at the foot of the bed. The object of this irrigation was to prevent putrefaction and inflammation.

The patient slowly rallied, and at the end of eighteen hours was warm, and in a favorable condition. Formerly, this was the period for amputation, for the danger which the older surgeons feared was the impending inflammation, which usually began in about twenty-four hours. But no prudent surgeon has subjected such a patient to the second shock, which results from an amputation, without a feeling of keen regret, and with intense anxiety. Too frequently has he been arrested in his operation by the announcement of his assistant that the patient was pulseless. Artificial respiration, hypodermic injections of brandy, etc., have rallied the vital forces so that the operation could be completed, and the patient removed to bed. But the revival was momentary. The nervous centres were too profoundly damaged to maintain their functions and death was inevitable.

Since carbolic acid has become so generally used in wounds I have ceased to regard time as an element in amputations. My attention was first called to the power of this class of agents to prevent inflammation, many years before carbolic acid came into use. A crushed foot came under my care, and it was doubtful whether an amputation would be required or not. I suspended the limb, and irrigated the wound with creasote water for ten days, during which time there was not the slightest evidence of inflammation in the part, nor was there any fever. At the end of that period it was apparent that the foot could be saved, and only the simplest dressings were required to perfect a cure.

It is now a matter of every day's experience that carbolic acid constantly applied to crushed tissues, as in irrigation, will arrest all tendency, both to putrefaction and to inflammation. This boy is a striking illustration of the power of this agent to protect a patient from those secondary evils which occur to injured parts. For four days this patient has been recovering from the primary injury, without being in the slightest degree damaged by the local conditions. There has been no other fever than that of reaction from nervous prostration, and that passed off on the second day. He has been taking food freely, his sleep is sound and refreshing, his pulse is nearly normal, and in every respect he seems to be fully restored. The shock of amputation will now be comparatively slight; certainly will not be dangerous in the sense it would have been if I had amputated within twenty hours of the injury. But to guard him against the possibility of harm, he has been taking two teaspoonfuls of whiskey with milk, every hour for four hours, which has caused moderate exhilaration.

It is not absolutely necessary to amputate to-day, so

far as the limb is concerned, for we can maintain it in this inert state for many more days, but the patient's general condition is entirely favorable, and as amputation is inevitable it might better be done now, and thus diminish the total length of time required for recovery.

The lesson which I wish to impress upon your minds is this, viz.: In crushing injuries requiring amputation, treat the lacerated parts with carbolic acid water applied by means of irrigation, and delay the operation until the patient is in a favorable condition to endure the shock. I need scarcely say that the same treatment should be adopted in similar injuries which do not require amputation, during the period of impending inflammation. But to be useful, the solution must penetrate the injured tissues, and to effect that it is often necessary to make incisions through the skin.

[The leg was amputated below the knee with but slight shock, and the patient made a good recovery.]

ORIGINAL ARTICLES.

SUPRA-MALLEOLAR OSTEOTOMY,

FOR OUTWARD DEVIATION OF THE FOOT, SUBSEQUENT
TO POTT'S FRACTURE HEALED UP
IN A BAD POSITION.

BY CHRISTIAN FENGER, M.D.,
OF CHICAGO.

THE operation of osteotomy, introduced into surgery as a means of correcting deviations in the shape and direction of the extremities, in cases in which this deviation was an essential hinderance to the use of the limb thus affected, was first systematized by Von Langenbeck, in 1852, for ankylosis in false position of the hip- and knee-joints.

The operation was performed according to the so-called subcutaneous method, that is, through the smallest possible opening in the skin, a fine saw was passed in upon the bone, and this cut through, the false position corrected, and the cut surfaces of the bone left to unite in the same way as in a common fracture. The small opening in the skin had for its object the prevention of suppuration. The subcutaneous operation of tenotomy has the same object. These precautions were natural and necessary prior to the advent of antiseptic operating and dressing.

A step in advance was made by Gross, of Philadelphia, in 1861, who rendered the operation more easy of performance by substituting the chisel for the saw.

Since this period, that is, for the last twenty years, osteotomy has been a common operation for the correction of the various deviations of the bones of the extremities, arising from rickets, ankylosis of the joints, fracture healed up in a bad position, or from any other cause.

Even before the Lister method was known in surgery, and employed in osteotomy, relatively little danger was connected with the operation. In most of the cases operated upon, the limbs healed in a correct position, just as they would after a common subcutaneous fracture; but sometimes suppuration would set in, and even erysipelas and pyæmia could not be entirely excluded.

The fear of these complications deterred the profession in general from recommending or making use of the operation in all cases in which it would prove

of essential benefit, and, we may say, limited the operation to those cases in which it was imperatively necessary.

The antiseptic method of operating and dressing has done away with this drawback in the indications for the operation, and at the same time has rendered the so-called subcutaneous operation unnecessary. We are now able to cut without fear through the soft parts covering the bone to be divided, making as large an incision as is necessary to cut through the osseous tissue with ease and safety. Through this opening we can make an incision in the periosteum, denude as much of the surface of the bone as is necessary, cut out by means of saw, and chisel and hammer, a piece of bone of the exact size and shape we require, unite the osseous surfaces with silver sutures, if we deem it advisable, and, in fact, operate with perfect safety and security, allowing sufficient time for all the details of the operation, because we know that we are protected by antiseptic precautions, by which the healing by first intention of a wound, whether large or small, is accomplished with equal rapidity and safety.

We must bear in mind, however, that this wider field in the indications for the operation which has been opened up by the Lister method, at the same time places an increased amount of responsibility upon the operator, since he now is held responsible for all septic accidents which might occur subsequent to the operation.

When all antiseptic precautions are taken, down to the most minute details, during the operation and in the course of the after-treatment, and carried through systematically, there can be no more danger than in subcutaneous osteotomy.

It was with this conviction that I did not hesitate to extend the employment of osteotomy to cases of false position of the foot following Potts' fracture. In these cases there is no vital indication for the operation, as such patients are able to limp around, with or without the use of a cane; but the deviation of the foot impairs their walking so considerably that a large number, particularly of the lower class of the people, are thereby unable to earn a living, as many of them cannot learn or work at a trade in which walking or the free use of the lower extremities does not play an important part.

The following cases will show that supra-malleolar osteotomy can be performed in such cases, not only without danger to the patient's life, but with the result of completely restoring the usefulness of the foot, so as to enable him to walk just as well as before the fracture and subsequent deviation had taken place.

CASE I.—Outward deviation of left foot, subsequent to compound comminuted Pott's fracture in a syphilitic individual—Supra-malleolar osteotomy, followed by suppuration—Union in eight weeks—Out of bed in nine weeks—Able to bear weight on foot in eleven weeks—Open sinuses for more than a year—Subsequent complete recovery, with perfect ease in walking. (Fenger, Chicago.)

Henry H., a clerk, thirty-eight years of age, was admitted to Cook County Hospital, June 16, 1879. The patient had syphilis some years ago, but with

this exception had been always healthy, until eighteen months previous to his entrance to the hospital, when, in St. Louis, Mo., he received an injury which caused a compound comminuted fracture and dislocation of the left ankle-joint. He was treated for five months in a hospital in St. Louis, and, at the end of that time, was able to walk around with a cane. On account of an outward deviation of the foot, however, walking was painful, and could be endured for only a very short time. In June an abscess formed around the internal malleolus, which was opened on admission, and some pus evacuated. No denuded bone could be felt through the wound.

He left the hospital at his own request, August 10, the wound not yet being healed, but returned September 1, suffering with increased swelling and pain, and was placed under my care.

Examination.—Patient is unable to walk on account of pain in the region of the left ankle-joint, at which point is found a Pott's fracture healed in a bad position, with outward deviation of the foot. The internal malleolus is very prominent, considerably enlarged, and covered on its inner surface with a layer of adherent cicatricial tissue. Above and exterior to the external malleolus is an irregularly shaped ulcer, about three-quarters of an inch in diameter, with quite abrupt edges and an uneven floor, covered with grayish-red discolored granulations, and secreting a large amount of thin, grayish pus. The surrounding skin is dark-red, swollen, and tender.

FIG. 1.



The deformity of the foot (shown in Fig. 1) is the real cause of his inability to walk, as the line of gravity of the limb falls internal to the foot, or, in other words, the foot is in a position of dislocation outside of the line of gravity; that is, the line of gravity of the foot forms an angle with the line of

gravity of the limb, which opens outwards, and in which the apex of the angle corresponds to the base of the internal malleolus, the seat of the old Potts' fracture.

To remedy this deformity—after careful investigation upon the cadaver, as to the best method of performing osteotomy in such cases—I devised the following operation:

September 12.—I operated, assisted by Dr. Sawyers, and in the presence of Drs. Gunn, Isham, Jacobson, and Lee. The patient was anesthetized with ether. A transverse semilunar incision was made over the inner surface of the inferior extremity of the tibia, two inches above the apex of the internal malleolus, through the skin and subcutaneous tissue, being careful not to open the sheaths of the tendons of the anterior and posterior tibialis muscles. A transverse incision was then made through the periosteum, and a short longitudinal incision on either end of this. The two flaps of periosteum were separated from the bone with a gouge, and a base three-quarters of an inch in width was marked out with a saw, for a wedge-shaped piece of bone, which was cut out by means of hammer and chisel, the point of the wedge being at the external border of the tibia. The attempt was now made to reduce the deformity by taking the foot in the right hand and bending it over the knee. While reducing this deformity, the fibula fractured at about an inch below the cut through the tibia, and the upper fragment of the external malleolus broke out through the ulcer described above, thus making a compound complicated fracture which extended into the ankle-joint. The external malleolus was the seat of a diffuse osteoporotic osteitis, and consequently the osseous tissue at this point was very fragile. The remaining part of the diseased malleolus was now removed, the cut surfaces of the tibia approximated and secured by strong silver wire sutures, a drainage-tube inserted, the wound closed by sutures, and Lister dressing applied.

The leg was then placed in an apparatus devised for the purpose, which consisted of a padded leather band around the upper part of the calf, which contained a heavy steel bar, that came down on the external side of the foot, bearing a foot-piece, which was inverted and kept in place by a strap on the inner aspect of the leg. The steel bar, when passing over the external malleolus, was bent out so as to permit the application of Lister dressings around the ankle-joint without removing the apparatus. The band was secured around the leg by leather straps and buckles, and the foot fixed to the foot-piece by roller bandages. The whole apparatus was suspended in a Hodgen's anterior splint.

13th.—A little hæmorrhage occurred during the night, with some pain.

14th.—Wound dressed; no suppuration.

16th.—Wound dressed; very little suppuration, but considerable pain. Applied ice-bag over the dressing.

October 8.—For the last two weeks he has had no pain. The wounds, both over the tibia and fibula, are granulating somewhat luxuriously. Touched with nitrate of silver.

18th.—Wound dressed. Foot seems to be turned

inward a little too much. A compress and bandage was therefore applied to correct the position, but this caused the patient so much pain that it was discontinued.

22d.—Wound dressed. The wound seems to have come to a standstill as regards healing, being covered with soft, pulpy, jelly-like granulations, which were cauterized thoroughly with nitrate of silver.

23d.—A small piece of dead bone came out from the wound over the external malleolus.

26th.—The splint was removed, in order to be used as a pattern in making a splint for a patient upon whom Dr. Gunn was about to perform a similar operation for the same deformity. The leg was placed in a Hodgen's splint.

29th.—Another small piece of dead bone was taken out. The patient has had some diarrhoea. The wounds showed no tendency to heal, and were covered with a thick, grayish, croupous exudate. Cauterized with nitrate of silver.

November 5.—The wound is looking better, and the silver wire is removed.

12th.—Removed the frame and suspension apparatus, and the limb was placed in a fracture-box.

December 4.—For the last two days the patient has had pain around the external malleolus, behind which was a small abscess, which was opened and washed out.

11th.—On account of the discharge the wound has to be dressed every day.

15th.—The discharge ceased and the patient got up and walked around a little on crutches.

25th.—Is up most of the day, and can walk a few steps without crutches. Two sinuses lead to the denuded bone.

January 17, 1880.—All the sinuses are nearly closed, but there is still some swelling.

23d.—A small abscess opened, through which a probe can be passed in deep within the bones.

March 1.—The wound is healing up on both sides with very little discharge.

April 2.—A discharging sinus from the cavity within the tibia was cauterized, three small fragments of bone extracted, the cavity filled with boracic acid, and a drainage-tube inserted.

March 15, 1881.—The last of the superficial ulcers healed, and the position of the foot was straight (as is shown in Fig. 2). The tendo Achillis is in the usual straight line, and upon bearing the weight of the body on the foot no deviation is noticeable. The patient walks two to three miles without inconvenience, and without the use of a cane. The inferior extremity of the tibia is still somewhat enlarged, and there is some tenderness on pressure on its surface.

May 7.—From time to time superficial ulcerations have formed, not upon the cicatricial tissue of the wounds of operation, but below this, on the cicatrix of the original wound caused by the compound fracture. Mobility in the ankle-joint is still somewhat limited, but this does not prevent him from walking without a cane, and without limping.

As far as the bones operated upon are concerned the final result of the operation is perfect, but the long convalescence in the case is an exception,

and was due to the specific chronic disease in the bones operated upon.

FIG. 2.



In uncomplicated cases, in which the patient's health is good, and the osseous tissue at the seat of the operation normal, the time for the healing of the cut surfaces of the bones and the osteotomy wound will not greatly exceed the usual limited number of weeks required for the recovery from a common, subcutaneous Pott's fracture. This I intend to show by the following case:

CASE II.—*Outward deviation of left foot, subsequent to Pott's fracture—Operation four months later—Aseptic course without suppuration—Eight days later, drainage-tubes removed—Perfect osseous union in four weeks—Complete recovery.* (Fenger, Chicago, 1880.)

John B., Irish, aged thirty-eight, a painter, was admitted to Cook County Hospital, July 14, 1880. He had previously had good health. On April 15, he was seated beside a tree, eating dinner, and got up suddenly; in so doing, he put his left foot into his dinner-pail; his right foot slipped, throwing his weight on the left foot, which turned outward and upward, causing him much pain. A physician was called, who pronounced the injury a fracture. At this time the foot was turned outward and upward until it was nearly at right angles with the leg. It was placed in loose dressings for a week, after which a starch-bandage was applied, which was continued for four weeks. The patient remained in bed for more than four weeks, and was then allowed to be up on crutches, but was not yet able to bear his weight on the foot. Consequently, four and one-half months after the receipt of the injury, the patient entered Cook County Hospital, and was placed in my care.

On admission, the patient was unable to walk without the aid of a cane. He could not bear weight

on the foot without intense pain. The same deformity existed which has already been illustrated in Case I.; that is, the foot was in a position of outward subluxation; the line of gravity of the limb, instead of being continuous with the line of gravity of the foot, formed with the latter an angle of from thirty to thirty-five degrees, the apex of the angle being at the base of the internal malleolus.

August 13.—The patient having been anaesthetized with ether, I proceeded to perform osteotomy, following the same plan devised in Case I., namely, a transverse incision was made across the lower extremity of the internal surface of the tibia, about one and three-quarter inch above the apex of the internal malleolus. The skin, subcutaneous tissue, and periosteum were divided; the periosteal incision being in the shape of an H, having an elongated cross-bar. The two narrow flaps of periosteum were now loosened from the bone. A narrow retractor was inserted between the periosteum and the bone, so as to avoid opening the sheath of the tendons of the tibialis anticus and posticus. Two parallel transverse incisions were made through the periosteum of the lower end of the tibia, distant about four lines from each other. With hammer and chisel, a wedge-shaped piece of bone was cut out through the whole thickness of the bone, the apex of the wedge being the cortical substance of the external surface of the tibia. The fibula was perforated by means of a drill, in different directions, but on the same horizontal plane. I now grasped the foot with my right hand, pressed my knee against the internal surface of the tibia, from which the wedge of bone had been cut out, and made powerful traction until the bones fractured. This restored the foot to its normal position, in which the cut surfaces of the tibia were in apposition. This position was maintained by means of sutures of heavy silver wire through the bone. A small drainage-tube was now inserted, the wound in the skin united, Lister dressing applied, the leg placed in Dr. Verity's modification of my original apparatus for the dressing and suspension of the foot in the after-treatment of supra-malleolar osteotomy, and the patient placed in a tent, in the grounds of the hospital.

15th.—Pulse, 90; temperature, 99.5°. Wound dressed. No redness, swelling, nor suppuration.

16th.—Pulse, 93; temperature, 99.4°. The patient suffers some pain in the wound. This was controlled by morphia.

21st.—The wound is now superficial. It was dressed; very little discharge. The drainage-tube was removed.

September 1.—The silver sutures were removed, and the foot placed in a fracture-box filled with oakum.

11th.—Firm union of the bony surfaces. The foot was taken out of the fracture-box and placed in a blanket splint. The wound is still superficially granulating.

October 2.—The dressing was removed, and the wound found to be healed. A plaster cast was applied, and the patient allowed to be up on crutches.

11th.—The patient wears the plaster cast contin-

ually, is gaining strength rapidly, and is now commencing to bear weight on the foot.

18th.—The patient was discharged from the hospital at his own request.

During the whole course of the after-treatment, the patient's temperature never exceeded 100°.

In January, 1881, I received a letter from the patient, who was then in Wisconsin, asking advice in regard to a cough. In the letter he stated that he was then able to bear his weight on the foot and walk around, without any trace of his former complaints.

(To be continued.)

THE USE OF ANHYDROUS SULPHATE OF ZINC AS A CAUSTIC IN CANCEROUS ULCERS.

BY WM. C. DABNEY, M.D.,
OF CHARLOTTESVILLE, VIRGINIA.

On the 1st of March, 1880, I was consulted by a lady, sixty-seven years old, for a "lump" in her breast, which, she said, had only appeared five weeks before. The lump was about as large as a pullet's egg, and quite hard. The skin over it was puckered, and the nipple retracted. It was not adherent to the tissues beneath it. There was an enlarged gland in the axilla, which suggested a longer period of growth for the tumor, but the patient and her daughter were very positive that it had only been perceptible for five weeks.

In view of the rapid growth and the presence of an enlarged gland, and the further fact that the patient's father had died with cancer of the face, I hesitated to operate, and asked Dr. I. L. Cabell, of the University of Virginia, to see the patient with me. He advised that the whole breast and enlarged gland be removed, and in case of recurrence that anhydrous sulphate of zinc should be employed as a caustic. The general health of the lady was quite good.

On the 4th of March I excised the whole breast and the superjacent skin, and allowed the wound to heal by granulation. The axillary gland was also removed, and one of the branches of the brachial plexus which it surrounded was carefully dissected out. In spite of the care exercised, however, the nerve-trunk was necessarily somewhat contused, and when the patient aroused from the effects of the chloroform she complained of considerable aching and pain in her arm. This lasted for two or three days, and then passed off in great measure.

About six weeks afterwards, when the breast had nearly healed over, the fingers commenced to swell at the joints, and to present a glossy appearance. She complained also of pain in the finger- and elbow-joints, especially on motion.

The wound in the breast was entirely healed in six weeks; but, one week after, it reopened, and in three days' time an ulcer was present as large as a silver half-dollar. The anhydrous sulphate of zinc was applied in the form of powder, and after the slough came away a healthy granulating sore remained, which healed in a few weeks; but, in a very few days, an ulcer again made its appearance, to which the zinc was applied as before. The ulcer each time was very painful, but the pain disappeared

soon after the application of the caustic, and did not recur till the cancerous ulcer formed again. The application of the caustic gave comparatively little pain. My patient lived at a distance, and in the country, so I lost sight of her for some time. On November 1, 1881, I received a letter from her daughter, in which she says: "Zinc has been applied eleven times, burnt alum twice" (the latter was an idea of the daughter's). "I applied alum on the 29th day of December last, which formed a scab which stayed on eleven weeks, to the day. When the alum was applied the second time the scab only remained on two weeks. I then used zinc as before. Pain is generally relieved when the caustic is applied, till a short time before we have to use it again. Her hand is not swollen now, and she doesn't suffer with her arm as much as she did, but she has no use of her fingers."

On the 21st of February last, nearly two years after the cancer was removed, I saw the patient again. A cancerous mass, the size of a pigeon's egg, had made its appearance just above the cicatrix in the breast, and she had a very troublesome cough and considerable shortness of breath. The caustic had been applied in all sixteen times, and had always given relief from pain for some weeks. Her arm was in the condition her daughter had described, and she told me that when the caustic was applied it caused acute pain for some hours in the arm and hand; very little in the breast.

The use of sulphate of zinc as a caustic is not new. It was a favorite remedy with Sir J. Y. Simpson, and is highly extolled by Dr. Stephen Smith, who speaks of it as the most useful caustic known for open surfaces.

Sir James Simpson (quoted by Dr. Smith) thus summarizes its advantages as a caustic: (1) It acts powerfully; (2) It acts rapidly; (3) It is very simple and manageable; (4) It is easy of application; (5) It does not tend to deliquesce or spread; (6) It is perfectly safe; (7) It is efficacious. On the latter point he speaks with some hesitation, but says he has seen very remarkable results from its use. If I may judge from my limited experience he might have added: (8) It causes much less pain than most of the agents of this class.

The case which I have reported is not calculated to make one an enthusiast on the subject of sulphate of zinc as a remedy for cancer, but I am satisfied that it has prolonged my patient's life and saved her much suffering, and I think the case worthy of record, in order to draw attention to a remedy which deserves a higher place than is generally accorded to it in works on surgery.

HOSPITAL NOTES.

PRESBYTERIAN HOSPITAL, PHILADELPHIA.

(Service of THOMAS B. REED, M.D.)

INJURIES OF THE SKULL.

(Reported by J. P. CROZER GRIFFITH, M.D., Resident Surgeon.)

Two very interesting cases of injuries of the head have recently been successfully treated at the Presbyterian Hospital.

Compound Comminuted Fracture of the Mastoid Bone.

—J. McM., brakeman, aged twenty-three, was brought to the hospital early on the morning of November 3, 1881. While on the top of a freight-car, he had been struck, it is supposed, by a bridge, and had lost a great amount of blood, which had saturated his clothing, and spread over the roof of the car. At the time of admission he was suffering from severe shock, and from concussion of the brain. Examination revealed a large gash completely through the left auricle, and extending backwards and horizontally over the position of the mastoid process. The tendon of the sterno-cleido-mastoid muscle was torn asunder, the auditory canal laid open and communicating with the rest of the wound, and the mastoid process broken into several pieces, the largest of which had been driven deeply inward towards the bottom of the wound.

Cerebral irritation soon developed, and the patient became so unruly that ether was administered, and the wound in the auricle closed by sutures, that in the neck being left open.

Liquid diet and ice to the head were ordered. All through the 3d and 4th days of November the patient lay in a totally unconscious condition, incapable of being roused, and with eyes shut, and snoring respiration. By the 5th it was possible to awake him, and his respiration was natural; and by the 8th of the month he was perfectly conscious and rational, but suffering from very severe headache, entire loss of appetite, and complete left-sided facial palsy.

A dangerous typhoid condition, lasting some time, now developed. This, however, yielded to treatment, and by the 1st of December he was able to leave his bed, although continuous and exceedingly severe headache still persisted. He constantly inclined his head to the right, and supported it by his hand, as the muscle of the left side was, of course, unable to sustain it. His temperature up to this time, and through his whole recovery, was but slightly elevated, reaching 100° but once.

Meanwhile the wound, which measured about two and a half inches in length, and one inch in breadth, and which extended inwardly fully two inches, had been suppurating freely, and filling up by granulations. The auditory canal opened directly into it, and no tympanic membrane could be discovered; and the patient was unable to hear a watch even when applied to the auricle.

Several small pieces of bone were at different times removed, yet the large fragment at the bottom of the wound was still firmly held by granulations. An aural examination, made early in December by Dr. Burnett, the aurist of the hospital, showed that hearing was still preserved, but that the fragment of bone was obstructing the passage of sound through the auditory canal. Subsequently, this piece, measuring about three-eighths of an inch in length, and one-quarter of an inch in breadth and thickness, was removed, and from that time the patient's headaches, which had been gradually becoming less severe, very markedly diminished both in number and degree.

A partition wall now commenced forming in the wound, partially shutting off an auditory canal, but leaving so narrow an opening internally that the condition of the tympanic membrane could not be seen. It was evident, however, that a perforation existed, since air could be forced from the nose through the wound.

On January 2, 1882, he was discharged from the hospital. He was seen again about the middle of February. His health during the interim had been excellent, and there had been no headache. The wound had healed almost entirely, and the new auditory canal was almost completely formed; but its internal opening had become exceedingly small, and it was utterly impossible to see the tympanic membrane. He could not, at

this time, hear a watch even when pressed against the auricle, although he stated that during the preceding month he had been able to hear it at a few inches' distance. The sterno-cleido-mastoid had reunited with the skull, and he was able to hold his head erect. The facial palsy was as marked as at first.

Probable Fracture at the Base of the Skull.—J. A. S., aged twenty-four, fell from a locomotive, not in motion, a distance of five feet, striking his head over the left parietal bone. He walked to the hospital, though experiencing much faintness, nausea, and vomiting upon the way. There had been considerable hæmorrhage from the nose and left ear. He reached the hospital early on the morning of December 31, 1881. The bleeding from the nose had ceased, but that from the ear still slightly continued. He complained of being a little cold and sick, and appeared to be laboring under great torpor and confusion of mind. He was put to bed, and dry cold to the head, low diet, and a purge ordered. Vomiting, sometimes of the blood which had been swallowed, was frequent during the day, and the patient lay perfectly quiet, and with eyes shut, except when a question, spoken in a loud voice, would secure a response of few words. His condition continued just the same for several days; great mental torpor, respiration quiet, pulse about 50, and, on one occasion, only 47 beats in the minute, temperature ranging from 99° to 100°, discharge from the ear more and more watery, and finally, almost colorless and very profuse, wetting the dressing of absorbent cotton and soaking completely through the pillow beneath. Unfortunately, no chemical examination was made of the fluid, and no means taken to collect and measure it; but certainly, in all, there were not less than one and a half pints discharged, a quantity far too great to be produced by exuded serum. Probably the amount was even greater than the estimate given. Under the microscope nothing was revealed but a clear, colorless fluid, containing a very few blood corpuscles floating in the field of view. The presence of blood disks is easily understood from the fact that hæmorrhage had at first taken place in the auditory canal. Upon the 3d of January he was somewhat better, now lying with eyes open, but still perfectly quiet, and never speaking unless addressed. The pulse was now about 60 beats in the minute. His condition from this time steadily improved. By the 6th of the month the discharge from the ear had almost ceased, the pulse ranged from 65 to 70 in the minute, and the mental torpor was less; but he suffered from severe headache. On January 11 he was permitted to leave his bed. Headache was still very severe, and usually situated over the right temple. He still seemed stupid, appeared to think slowly, and when addressed roused himself as though from sleep. In the left ear he was markedly deaf, and could hear a watch only at a distance of two and a half inches. Examination showed that both membrana tympani were whiter than normal, while that of the left ear exhibited at one point a reddish spot, probably a cicatrix. The patient stated that he had been slightly deaf previous to his injury, but that it had never caused him any inconvenience, as at the present. On January 15 he was discharged, cured. His headaches were at this time very slight, and his pulse was, pretty constantly, 84 beats in the minute.

Remarks.—This case is especially interesting in that it is almost certainly one of fracture of the base of the skull, and that so complete a recovery followed. Certainly the patient showed two of the prominent symptoms of this injury, viz., profuse watery discharge from the ear, and a very slow pulse.

MEDICAL PROGRESS.

INTESTINAL DIGESTION.—DR. ROBERT MEADE SMITH, the Demonstrator of Physiology in the University of Pennsylvania, has been engaged for some time past in the study of intestinal digestion. Our entire ignorance of any positive knowledge of the composition of the secretion of the small intestine, and of its action on the different food-stuffs, depends upon the failure of all attempts as yet to secure a pure secretion, free from pancreatic or biliary juice, and yet keep the intestine in its normal condition. The method of Thiry, the best process yet described, of resecting a loop of intestine, one end of which is closed, and the other fastened to the opening in the abdominal walls, while the continuity of the intestine is restored by again uniting the divided canal, has entirely failed to give any reliable results; for, although the isolated loop still has its circulation maintained, the necessary removal of the mucous membrane of the part experimented on from contact with the other intestinal juices and contents of the intestine, and its consequently enforced functional inactivity, renders it impossible to regard its secretions as at all representing a normal intestinal juice.

The method which Dr. Smith has found to give the most reliable results, is to establish a fistula in the duodenum, about six inches below the pancreatic duct, using a tube similar to the ordinary Bernard gastric canula, the inner plate of which is rolled on itself, so as to form a section of a tube, and thus adapt itself to the curved anterior walls of the intestine; the stitches which fasten the tube in the gut also serve to unite the canal to the abdominal walls and to close the wound in the latter. Dogs subjected to this operation usually do well, and in from two to three weeks are entirely recovered from the effects of the operation. When it is desired to collect the intestinal secretion, the animal is allowed to fast for thirty-six hours, so as to remove all *débris* of food from the intestine, and a thin rubber bulb, with a narrow tube, is then passed in through the tube into the intestinal canal, and carried just below the opening of the pancreatic duct. The bulb is then slowly distended with warm water, and the intestine thus entirely occluded, and all fluids prevented from passing from above downwards. Another similar bulb is then passed down the intestine for about twelve inches, and distended, and the portion of the intestine between the two, communicating with the canula, washed out with distilled water. The dog is then supported by straps around his body, which only restrain him when he attempts to move, and the secretion which flows from the tube is caught in a funnel and collected. In this manner, from twenty to forty cubic centimetres of intestinal juice, absolutely free from pancreatic juice and bile, as shown by the chlorine and Gmelin's tests, can be collected in an hour, while by Thiry's method only a few drops are to be obtained.

Dr. Smith finds that intestinal juice thus collected has an invariably alkaline reaction, with a specific gravity of 1.018, is pale yellow in color, and filters with difficulty. Analysis shows that in one hundred parts of the filtered juice there are:

Water,	98.86001
Albumen, }	
Ferments, }	
Mucin, }547560
Chlorides of Sodium, Magnesium, and Potassium, Sulphates and Carbonates of Sodium and Potassium, Carbonate of Calcium,592410
	99.999971

Two ferments have been isolated, one converting starch into sugar, and the other changing cane-sugar into grape-sugar.

Dr. Smith is making a thorough study of the chemical composition of the secretion thus collected, and the digestive action of its ferments, and his results promise to be most interesting and valuable, and to throw some positive information on this obscure subject.—*Penn Monthly*, April, 1882.

SALICYLATE OF SODA IN ACUTE TONSILLITIS.—From the close connection which has long been recognized between rheumatism and certain forms of tonsillitis, Dr. Jos. W. HUNT has been induced to try this remedy, and the results have been most favorable. In his hands it has acted almost as a specific in acute tonsillitis. Provided that there is no actual formation of pus, most decided relief is afforded in about twenty-four hours—*i. e.*, the swelling and angry-looking condition of the tonsils are reduced, pain diminished, and the patient can swallow with comfort, while the temperature becomes normal, and the pulse is reduced in frequency and improved in quality. Since he has used this drug he has had no single case go on to suppuration; nay, more, where it has appeared, from the state of the tonsils and the brawny and infiltrated condition of neighboring parts, that suppuration must ensue, it has been arrested by this treatment. The doses used have been fifteen grains every four hours for an adult, and about ten grains every four hours for a child. He has met with no unpleasant symptoms from its use, beyond a little tinnitus and occasional vertigo. When the brunt of the attack has fallen upon one tonsil, a relapse in the other, when the salicylate has been discontinued, is not uncommon, but this speedily yields to the same treatment. One or two medical friends, who have used the salicylate at his suggestion, have expressed themselves in equally favorable terms.—*Lancet*, March 11, 1882.

PATHOLOGY OF PNEUMONIA.—Pathologists have long been struck with the points of close analogy between croupous pneumonia and acute specific diseases, and especially with the resemblances between its clinical history and that of erysipelas. The dependence of the latter disease on a microscopic organism was demonstrated by v. Recklinghausen and Lukomsky, and has been corroborated by many subsequent observers, especially by Koch. Several investigators have endeavored to find, in cases of acute pneumonia, a similar pathogenic organism. Klebs discovered spherical monads in the contents of the bronchial tubes and in the fluid of the cerebral ventricles; Eberth has described ellipsoidal micrococci in the infiltrated lung and inflamed pleura and pia mater in a case of pneumonia complicated with meningitis; while Koch observed similar organisms in the lungs and kidneys in a case of pneumonia following relapsing fever. The most recent investigations on this point have been carried on by Friedländer, of Berlin, who has discovered organisms in every one of eight cases which he has carefully investigated. The search was made in the fibrinous effusion in the bronchial tubes, and in sections of the lung tissue and inflamed pleura, hardened in alcohol. The micro-organisms found were almost constantly of similar size and form, ellipsoidal micrococci, a micro-millimetre in length and one-third less in breadth. Spherical organisms were also seen, some apparently really such, others evidently the oval bodies viewed endways. They were uniform in substance, slightly refracting, and colored deeply by the aniline reagents. Their usual arrangement was in pairs, but in some cases they formed long chains, and in the bronchial exudation they were spread out in a film. An aggregation in colonies was seen only in the interior of the lymphatic vessels. Their abundance within the alveoli was remarkable; thousands were counted within a single air-cell in the stage of red hepatization. As a rule they

could not be seen within the walls of the alveoli, bronchi, or vessels, but in one case numbers were observed in the lymph-spaces of the interstitial connective tissue, which was oedematous, and in the lymphatic vessels, which presented swelling of the endothelium, within the cells of which the organisms were also seen. This lymphatic infiltration has, Friedländer believes, a special significance. The micrococci in the bronchial exudation may possibly be connected merely with changes in the necrotic material, but this explanation can scarcely hold good of their presence in the fibrinous contents of the alveoli; since the lymphatic changes, in the case alluded to, demonstrate that the micrococci may pass into the current of the circulation, and develop in the living tissues. The changed lymphatics were actually visible to the naked eye as white threads. Although the alteration was found in one case only, this was a typical example of the so-called croupous pneumonia. Moreover, the organisms were found in the tissue of the inflamed pleura in almost every case; abundantly in the oedematous tissue of old adhesions, and their presence here has the same significance as the lymphatic infiltration. Are these organisms the cause of the pneumonia? To this question, Friedländer observes, anatomical investigation cannot alone give a certain answer. The theory is favored by the above-mentioned consideration and the analogy between pneumonia and some other acute infectious diseases. Its frequent occurrence as a result of exposure to cold constitutes, however, a difficulty in accepting this theory of its causation, which is scarcely lessened by an hypothesis advanced by Friedländer, that the organism may undergo certain stages of its development at a low temperature. It would seem more probable that blood changes induced by cold may set up local inflammation, in which the organism finds conditions favorable for its development and that its presence may thus be a secondary, and not a primary, element in the pathology of the disease.—*Lancet*, March 4, 1882.

THE CONTAGION OF TYPHOID FEVER.—Dr. ARNOULD, of Lille, discusses, in the *Bulletin Médical du Nord*, August, 1881, a small epidemic of typhoid fever which broke out in his wards in the military hospital at Lille. He has used the opportunity of studying closely the conditions of transmission of this disease. Medical opinion ranks, he observes, typhoid fever among the infectious diseases, and its development requires the previous existence of a focus. Direct contact with the patient as a cause of contagion is not accepted; and Van Gietl has gone so far as to say that "a typhoid patient, naked and washed, would not injure any one." The facts observed by Dr. Arnould, the rapid diffusion of the disease through a series of patients in the same hospital-ward, without the existence of any epidemic in the town, seem to him to contradict this too positive assertion. He thinks, in certain cases, that typhoid fever may be really contagious. As to the question whether the contagion is lessened or increased, or the soil more or less favorable for its reception, Dr. Arnould does not pronounce a decided opinion. He inclines, however, towards the latter hypothesis, and remarks upon the deplorable sanitary condition of the hospital in question. In such a medium, the creation of a focus of disease may be very rapid, and the apparent contagion may well be only an infection of special activity. To English hygienists, it will seem surprising that, on such slender grounds and under such circumstances, so excellent a sanitary authority as Dr. Arnould had not proceeded to eliminate the ordinary causes of typhoid fever before proceeding to invent new ones. We may remind him that, out of 16,000 or 17,000 cases of typhoid fever admitted into the London Fever Hospital, the disease has never been known to spread from one patient

to another; and this is apparently due to the care taken to disinfect and remove the typhoid stools, which are thoroughly recognized as the general seat of infection. In the French hospitals, with the filthy arrangements commonly prevailing with the latrines, the dirty habits of the patients, the want of personal cleanliness on their part, and also on the part of the nurses and assistants, anything is possible in the way of filthy contamination; and, until these facts are perfectly understood by French hospital authorities, little attention will be paid to the probable fact, that typhoid fever in France is not conveyed by any other form of infection than that by which it is spread in England or other countries. The contagiousness of typhoid fever by other sources, however, is not a thing to be set aside as impossible, or as unworthy of investigation; but it is certainly necessary first to eliminate the ordinary causes of infection.—*British Med. Journ.*, March 11, 1882.

EXOPHTHALMIC GOITRE.—In a short monograph on the pathology and treatment of exophthalmic goitre, M. NOËL GUÉNEAU DE MUSSY describes four cases of this disease, which have recently come under his notice. Two of these occurred in males and two in females. In all four the ordinary symptoms were observed, while two were conspicuous for enlargement of the tracheo-bronchial glands; two for distinct choreiform movements, and two for muscular weakness and trembling of the limbs. In two there were cardiac complications, and in one marked pigmentation of the face. M. Guéneau de Mussy is an advocate of the theory of defect of innervation. He lays great stress upon the enlargement of the thoracic glands about the bronchi and trachea, and in the immediate vicinity of the pneumogastric nerve. He lays down a few diagnostic rules for the determination of such enlargements, for he considers that they may give rise to irritation of the pneumogastric nerve by contiguity, and so form the initial factor of the phenomena of this disease. He, however, throws this out only as a hypothesis, but one which is strongly supported by facts. He does not deny that this disease may have other sources of origin, such, for example, as a peripheral one, similar to a sclerosis of the posterior cornua from a lesion of a nerve. In support of the defect of innervation theory, he further adduces the pigmentation of the face, which occurred in one case, and sees in the irritation of the pneumogastric nerve a plausible explanation. He then goes on to strengthen his argument by reference to Dr. Greenhow's remarks on bronzing of the skin, in an address on Addison's disease, read before the International Medical Congress. M. de Mussy seems to have faith in the freshly prepared tincture of iodine, and in the natural waters of Dongues and La Bourboule; but it is proper to remark that the treatment is given of only two cases, one of which died, and the other made a brilliant recovery.—*British Med. Journ.*, March 11, 1882.

THE TEMPERATURE OF INSPIRED AIR.—Dr. FLEMING has made some experiments on dogs, to determine the amount of heating which air undergoes in the upper part of the air passages during inspiration, with reference to the after-treatment of tracheotomy. He finds that the air is heated to within 20° Fahr. of the animal's temperature, whatever the initial temperature may be, so that in dealing with human beings a temperature of nearly 80° should be the best. To keep the patient in an atmosphere of 80° would obviously be injurious. He therefore suggests, that after tracheotomy, air, heated to a temperature of 80°, and saturated with moisture, should be conveyed by a tube from a suitable apparatus to the inner tracheotomy tube. This can conveniently be arranged with some such apparatus as the following, which he has devised for the purpose. It consists of a

tin vessel filled up to a small window with water, and having a tight-fitting lid, through which pass two tin tubes, and in which are also two apertures to receive the thermometer and the gas regulator. The water is kept at a constant temperature by the gas regulator and the Bunsen burner. The opening is connected by a piece of India-rubber tubing with the internal tracheal canula, and care is taken that the tube is so tied, either to the person of the patient or a suitable support, that no traction occurs. A short distance from the tracheal canula a T piece is introduced, with two valves, one preventing the air passing back into the chamber during expiration, the other permitting its escape, but preventing entrance of air by this channel during inspiration. By this simple arrangement the air supplied to a patient after tracheotomy may be kept for an indefinite time at the temperature and moisture desired, and he believes comfort will be given to the patient, and we will avoid the pulmonary complications which so frequently follow tracheotomy and discredit the operation by doing away with the benefits which have been derived from it.—*Glasgow Med. Journ.*, March, 1882.

ANTIDOTE FOR STRYCHNINE.—Messrs. GREVILLE WILLIAMS and WATERS (*Proceedings of the Royal Society*, xxxi., p. 192), have discovered an antidote for strychnine in the organic base first prepared by the former, by distilling cinchonine with caustic potash, and to which he assigned the name β lutidine. Having ascertained, by experiments upon frogs, that β lutidine causes a distinct increase in the tonicity of both cardiac and voluntary muscular tissues; also retardation of the heart's beat; that it arrests the inhibitory power of the vagus; and that, by its action upon the nerve-cells of the spinal cord, it, in the first place, lengthens the time of reflex action, and then arrests that function; they proceeded to test its direct counter-action to strychnine. The brains of frogs were destroyed in the usual way. An animal was then treated with β lutidine till reflex action disappeared; when the subsequent administration of strychnine was not followed by the usual results. To another frog, strychnine was given till strychnine tetanus was produced, when it was found that the subsequent administration of lutidine caused the tetanus to pass off. The almost simultaneous administration of the two bases was not followed by tetanus. The results of these experiments are most promising; and it is to be hoped that the fanaticism of the antivivisectioning portion of the community will not be influential to prevent the use of β lutidine in practical toxicology. We hope to hear that the base has been used for experiments on animals poisoned by strychnine, and whose brains have not been destroyed.—*British Med. Journ.*, March 11, 1882.

EPIDEMIC PNEUMONIA.—The occurrence of forty-two cases of pneumonia in a small German village of seven hundred inhabitants unquestionably merits the designation of "epidemic," given to it by Penkert, the narrator of the outbreak. The first case occurred on March 11; and the last on May 14. The mode of development and progress of the cases give considerable probability to the theory of its miasmatic origin. The first twelve cases were in children who attended the same school. The village consists of a single street, and at its lowest extremity is the school building, separated from a new cemetery only by a piece of low ground, in which is a pool. For some days before the outbreak the wind blew from the direction of the cemetery and pool to the school-house, and the ground water was so high that most of the cellars in the lowest part of the village were flooded, and there was a sudden rise of temperature. It is conjectured that the saturated soil of the burial-ground furnished germs which were carried by the wind to the

schoolhouse. It is noteworthy that the first cases occurred only among children occupying rooms facing this cemetery; and that, from the direction of the wind, no other house in the village would be exposed. Of the other cases, in twenty-eight there was a strong suspicion of direct contagion. After the commencement of the Easter holidays no other children attending the school were attacked. The mortality was low, only two of the whole number of cases being fatal. The duration of the disease never exceeded three days. The part of the lung affected was, in sixteen cases, the right lower lobe, in fifteen the left lower lobe, and in one case the apex of the left lung. In every case the onset was sudden, and the symptoms in other respects such as characterize acute croupous pneumonia.

A recrudescence of epidemic pneumonia in a prison has afforded Kühn the opportunity of ascertaining by experiment whether this form is transmissible to animals. He therefore introduced beneath the skin of rabbits portions of recent pneumonic sputa, and obtained remarkable results. Of seventeen rabbits employed, five died within forty-eight hours after the inoculation, without any elevation of temperature; six others were attacked with high fever, ending with a crisis on the fifth or seventh day. Some died, the others were killed, and in all there were found foci of pneumonic infiltration and various other changes: pleurisy, pericarditis, enlargement of the spleen, swelling of Peyer's patches, parenchymatous nephritis, injection of the pia mater, oedema of the brain. The lesions thus resemble those of acute septicaemia very closely. In two of the rabbits, however, besides the lesions already described, recent tubercles were found in the lung.—*Lancet*, Feb. 25, 1882.

QUINIA.—Experiments by CHIRONE, of Messina, have shown that quinia can lessen sensibility, although it is incapable of causing actual anaesthesia; nor does it, even in large doses, abolish reflex action. The stupefying effect occurs only when the quantity taken approaches the toxic limit. The first sensation to be lessened is that of touch, then that of pain, and lastly, sensibility to heat. The diminution often commences in the anterior part of the body before the posterior. Deafness and blindness are often produced in dogs, as in men, by large doses. Slight diminution of tactile sensibility may be produced in man by a dose of fifteen grains repeated after a short interval. If quinia is injected into the arteries, local insensibility is produced in the part to which it is conveyed; and all functional activity is suspended in this region. Very large doses cause general convulsions. No differences in the precise physiological action are to be observed between quinia, quinidia, and cinchonidia; but the latter appears to be the most toxic.—*Lancet*, Feb. 25, 1882.

DEATH AFTER OVARIOTOMY, DUE TO PREVIOUS TAPPING.—Mr. LAWSON TAIT read a paper on this subject at the meeting of the Midland Medical Society, held Feb. 1. He drew attention to the fact that amongst the last hundred ovariectomies (for cystoma) which he had performed, there had been only three deaths. In all, the deaths had been due to the formation of a firm white clot, which started from the point of ligature of the pedicle, and slowly traversed the venous system till it reached the heart, death ensuing in from thirty to forty hours after operation. The symptoms which preceded death were swelling in the legs, rapid rise of pulse, and its disappearance from the extremities some time before death, breathlessness, ending in suffocation and slight delirium. He had seen several such deaths, but not one in a patient who had not been previously tapped. His explanation was that repeated tapplings deprive the blood of some element or elements included in the in-

nite variety of albuminous substances found in ovarian cysts, the deficiency of which predisposed to coagulation of the blood. The author thought that no case of ovarian tumor should be tapped till previous abdominal section had shown that it could not be removed. He believed that if this rule were followed the mortality might be reduced to less than one per cent., if cases were operated on early.—*Med. Times and Gaz.*, March 11, 1882.

CAUSES MODIFYING THE INFECTIVITY OF SCARLATINA.—At the meeting of the Medical Officers of Health Society, on February 17, Dr. ALFRED CARPENTER read a paper entitled "Some of the Causes which Increase or Modify the Infectivity of Scarlatina," of which the following is an abstract. He considered that a long period of quarantine, such as eight or ten weeks, and sometimes four months, was to be deprecated in the case of children recovering from scarlatina; he himself for many years had isolated cases for a fortnight, and in some instances for a week only, after the departure of the fever, and he had never heard of any evil result accruing from such a course. He next mentioned various cases in large schools which served to explain his views as to the cause of scarlatina. The first outbreak of which Dr. Carpenter made mention was, in his opinion, entirely caused by a cesspool, situated in the school-yard, which was the recipient of washings from a slaughter-house, and once a week, at least, the aerial contents of this cesspool were displaced into the closets of the boys, situated in close proximity to it. As soon as this cesspool was emptied and the drains properly directed into the sewer, scarlatina ceased to appear in the school. Want of proper ventilation in the soil-pipe and drains belonging to the building caused an outbreak of scarlatina in another school, the drains being in direct communication with the main sewer of the district, and scarlatina being also at that time very prevalent in the neighborhood. Dr. Carpenter believed that the nature of the blood into which the poison was received aided more materially in increasing the mortality from scarlatina than the character of the poison itself, and, in support of this theory, he instanced two outbreaks of this disease, in one of which the mortality had been excessive, fourteen persons having died out of seventy-five who were attacked, while in the other outbreak only three deaths occurred, though the total number of cases was one hundred and eight. Dr. Carpenter attributed this difference in the mortality to the surroundings of the children; in the one instance, the conditions were on the whole healthy, but in the other the children were exposed for a much longer period to an impure atmosphere, and were badly cared for at home. The cause of the two outbreaks was similar in character; the excreta of the first case of scarlatina in each school passed down unventilated drains, which communicated directly either with classrooms inhabited by the children or with closets used by them. In conclusion, Dr. Carpenter said that he believed scarlatina more often arose from sewage emanations or sewage contaminated with scarlatina germs than from personal contact. He considered that in many cases where the cause of the disease had not been discovered, it might have been found, on careful investigation, to proceed from some accidental inhalation of sewer air, and that persons who were constantly exposed to such an atmosphere were liable to more severe attacks of scarlatina and diphtheria than those who inhaled the poison for a short period. Dr. Carpenter also suggested that the discharge of hot water and waste from steam-engines into the sewers was a source of danger in producing scarlatina and diphtheria. In the discussion which followed, the President, Dr. Churchill, Dr. Child, Mr. Jacob, Dr. Kelly, and Mr. Shirley Murphy took part.—*Lancet*, March 11, 1882.

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THE TOTAL EXTIRPATION OF THE UTERUS THROUGH THE VAGINA.

THE success attending the removal of a carcinomatous uterus through the vagina reported by Dr. Fenger and by Dr. Cushing, in the *American Journal of the Medical Sciences* for the current year, will tend to direct the attention of American gynecologists, with more interest than has yet been displayed, to the merits of this practically new operation. After a successful operation by Récamier, there is a desuetude of fifty years, until in 1879, Czerny revived it by a successful case. In its practical form the operation may be said to belong to Schroeder, as he, so late as 1881, partly demonstrated its limits of usefulness and the factors of its safety.

The unfortunate results attending Freund's operation have naturally turned attention to the technically more difficult removal of the uterus through the vagina. The operation must not be confounded with the amputation of the uterus through the supra-vaginal neck by laparotomy; for, as Schroeder has shown, the results become more uncertain the more deeply we have to penetrate into the small pelvis from above. Here will probably be drawn the line that determines whether the objective point of the operation is to be approached through the abdomen above or below from the vagina. In its practical relations the subject must be studied from a higher level than mere statistics. The fact that 69 per cent. of those operated upon have recovered, while many steps in the operation are confessedly open to improvement, is not so significant of the character of the procedure as the statement of Schroeder that there was no collapse. Two of his patients lost so

much blood that the pulse could no longer be felt,—a condition that affords but a small hope for the recovery of the subject in laparotomy,—but no collapse followed. The subjects of his operations recovered like puerperæ after considerable hemorrhage, and an easy convalescence was the rule. The success attending excision of the supra-vaginal neck would seem to point to the vagina as the natural channel for all surgical measures that involve the complete severance of the vaginal connections of the uterus.

There is, however, another side to the picture. Some of the steps in the manipulation are of extreme difficulty. The uterus must be of the size that will allow of inversion of the fundus into the vagina. If, from the size of the organ, this is impossible, the operation becomes one of great difficulty when the ligation and division of the broad ligaments are attempted. Under the most favorable conditions this part is not easy to perform. The necessity to invert the uterus is not absolute, since Baum omits this and proceeds after the manner of Billroth. It is safe to say, however, that Schroeder is right, and that a uterus so large that it cannot be readily manipulated constitutes a contra-indication. More important, however, than any technical difficulties in the way of its performance is the very conservative view English-speaking gynecologists take of all radical surgical interference with malignant disease. The period is a brief one in the history of a case of carcinoma during which its limits are confined to the uterine body or supra-vaginal neck. Tissue infiltrations of near parts may not be discovered, but whether extensive infiltrations or mere nodes, they absolutely preclude any interference of such a nature as to jeopardize a life already hopelessly involved. In a carcinoma of the uterine body laparotomy, with amputation at the os internum, offers a safer and more easily managed substitute; while, for the various forms of malignant degeneration of the neck, supra-vaginal excision gives promise of brilliant results. In the latter, Schroeder has experimented in 28 cases, with only two deaths. The conjunction of local conditions, by which the extirpation of the uterus through the vagina is clearly indicated to the exclusion of any other procedure, must, from the nature of things, be a rare event in pelvic surgery; but in view of such an event, it is not undue praise to say that at present we have no substitute for it except the unsatisfactory method of Freund.

What the ultimate saving of human life may be, since the operation is designed to cope only with malignant disease, can scarcely enter as a factor into the question of its selection. If we are to judge of this by the present status of amputation of the breast for scirrhus, the problem of its utility may

never be solved. We have however the satisfaction of knowing that in the present activity of pelvic surgery this operation will rapidly complete its history, and we have no doubt that, notwithstanding the conservative tone of American surgery, we shall contribute an abundant material to it. It does not seem to us over-sanguine to hope that we have in this operation one that does not offer exceptional success, but that may be regarded as a practical surgical resource that will be as clearly defined in its limits of usefulness and as well established in its technical procedure as ovariectomy.

NITRO-GLYCERINE.

ONE of the most important additions recently made to practical therapeutics is *nitro-glycerine*. This agent contains enormous energy stored up in its constituents, and would therefore seem, *a priori*, to be possessed of intense physiological activity. Investigations have confirmed this supposition. The form in which it is made available for administration is the centesimal solution: one minim of nitro-glycerine dissolved in 100 minims of alcohol. As there are remarkable variations in the susceptibility of persons to the action of this agent, it is necessary to begin with a minimum dose, and increase gradually until some physiological disturbances occur. Some persons experience effects from a single minim of the centesimal solution. Beginning with a drop of this solution three times a day, a drop should be added every day until the desired effect be produced. When the person taking it is under the eye of the physician, a much more rapid increase of the dose may be allowed. Some persons are able to take a minim of pure nitro-glycerine, but such insusceptibility is comparatively rare.

The physiological effects of nitro-glycerine are eminently characteristic, but they accord with those of the nitrites in general—with amyl-nitrite, nitrite of soda, etc. When a sufficient dose is swallowed, in a few minutes the face flushes, the heart bounds, and continues in rapid, even tumultuous action; the superficial arteries pulsate strongly; the head aches, with a tense, band-like feeling about the forehead, and singing in the ears, vertigo, dimness of vision, confusion of mind, and even suspension of the cerebral functions or unconsciousness may result. According to Dr. Murrell, who has himself experienced the action to this extent, unconsciousness may be produced without detriment, and be quickly recovered from. The effects are clearly referrible to paresis of the vasomotor system, and of the pneumogastric, whence increased action of the heart and dilatation of the arterioles follow. The hydrostatic effect of this change in the vascular tension, and in the distribution of the blood, must be obvious to all. Without further comment on the physiological actions, we

now lay before our readers the results of clinical experience.

The applications of nitro-glycerine to the treatment of disease are directly deducible from the physiological study—another proof, if more were needed, of the value of the physiological method. A remedy which so depresses the vascular tension must be useful in conditions of disease in which the vascular tension is abnormally exalted. A capital illustration of this state is afforded in the hypertrophy of the heart and of the muscular layer of the arterioles, with a resulting high arterial tension, belonging to chronic Bright's disease. It has even been maintained that this condition of the circulatory system is the first step in the pathological changes. And, as has recently been shown by DaCosta and Longstreth, very important structural alterations occur in the solar ganglion and semilunar plexus. Whether these pathological conditions precede, or succeed, to the renal changes is yet a disputed question, but it is evident that the sympathetic system is concerned in them in some way. This fact has induced the use of nitro-glycerine in the chronic form of albuminuria, and it appears to have been distinctly beneficial. It is given in sufficient quantity to antagonize the high tension of the arterial system, and the state of lessened tension must be maintained long enough to have an effect on the kidney textures. If further experience shall confirm the observations already made, we have a valuable addition to our resources.

In *angina pectoris*, a state of exalted arterial tension, in a considerable proportion of cases, is an important factor. Observing this, and remembering the effect of amyl-nitrite on arterial tension, Brunton concluded that this agent would afford relief in *angina pectoris*. His theory was amply confirmed on trial. Although nitro-glycerine cannot be utilized in the treatment of the paroxysm of *angina pectoris*, its methodical administration during the interval may prevent the attacks.

The application of nitro-glycerine to the treatment of certain cardiac diseases is a most important therapeutical expedient. When the walls of the heart are weakened by myocarditis, or by fatty degeneration, any cause suddenly increasing the vascular tension may arrest the movements of the organ. Great embarrassment of breathing, pulmonary congestion and cedema, and general dropsy may result from the weakness of the heart's walls, and these difficulties are enhanced by a condition of elevated tension of the arteries. In such cases nitro-glycerine is found to do much better than digitalis, which, on the other hand, is more efficient when the vascular tension is low.

One of the forms of *migraine*, or sick-headache, is that characterized by contraction of the arterioles,

and consequent pallor of the face and lips. This is speedily relieved by nitro-glycerine. Also, the cases of neuralgia associated with spasm of the arterioles are similarly benefited. There is, probably, a form of *dysmenorrhæa* in which the same condition of the vascular system exists, and in which the same kind of remedy is found to give relief. We might enumerate many maladies, differing in various ways, but agreeing in respect to the high state of the arterial tension, improved or cured by nitro-glycerine. There is, therefore, a wide field of usefulness for the new agent; and its applications to the treatment of disease, based on its physiological actions, are clearly defined, and have an exactness belonging only to mathematical science.

AMERICAN EXPERTS—ENGLISH JURISPRUDENCE.

AN American physician, having any acquaintance with the methods which obtain in the conduct of criminal cases before our American courts, could hardly fail to be struck with the weak defence of the prisoner Lamson, in its medical aspects. At the present time, the subject of the chemical reactions and the physiological effects of the vegetable alkaloids found in the human body after death from one of them must be involved in much doubt, owing to the discovery of *ptomaines*, alkaloidal substances, "discovered and named by Selmi, generated during decay, and closely resembling the vegetable alkaloids, not only in their physiological effects, but also in their chemical reactions." *Ptomaines*, says Dr. Stevenson in the *London Medical Record*, Nov. 15, 1881, are usually produced in substances which, after brief exposure, have been excluded from access of air, as in buried corpses, in the internal viscera of the living, sausages, and canned foods; but Spica has obtained no less than four *ptomaines* from the fluid of peritonitis, taken from a living patient. It appears, also, that "*ptomaines* present, in general, the leading properties, physical and chemical, of the vegetable alkaloids, as *veratria*, *morphia*, and *codeia*, and may readily be confounded with them." Such is the statement of Dr. Thomas Stevenson, the toxicologist to whose researches Dr. Lamson chiefly owes his conviction. But the counsel for this unfortunate wretch made no attempt to put before the jury these remarkable statements from the man whose pitiless recital of chemical facts took away any chance for acquittal, which, in the absence of such testimony, might have been possible.

If this case had occurred before any American tribunal, the court-room and the papers would have been filled with the history and properties of *ptomaines*. If the counsel for the defence had been ignorant of them, "experts" would have hastened to fill him with knowledge. Whilst we may admire the superior dignity of the English method, we can

hardly commend the knowledge or wisdom of the barrister who did not know, or failed to get, the information which might have seriously damaged the chemical testimony of the prosecution. If the attempt to get this important point before the jury had failed, at least public attention would be powerfully directed to the *ptomaines*, and their real place in toxicology might have been established.

ACONITIA OR ACONITINE.

THE poisoning case, in which Dr. Lamson used the alkaloid *aconitia*, has directed professional attention anew to this powerful alkaloid. The term "powerful" is, however, only properly applicable to the *Duquesnel*, or to the English crystallized *aconitia*. The alkaloid of commerce, in the form of a white or a yellowish-white powder, is by no means equal to the crystallized alkaloid in physiological activity, and is, probably, composed of several principles. It contains *pseudaconitine* and the alkaloid newly rediscovered by *Duquesnel*, and called by him *napelline*, and it is also much subject to adulteration. In any medico-legal investigation it is of great importance to determine the form of *aconitia* which is to be the subject of inquiry.

The question of amorphous or crystallized *aconitia* has other practical bearings. We have heard recently of a *concours* for a hospital appointment, in which a candidate is supposed to have failed in consequence of an incorrect statement regarding the dose of *aconitia*. He was asked to give the dose of *aconitia* for a child one year of age, if we are correctly informed. He replied from $\frac{1}{100}$ grain to $\frac{1}{1000}$ grain, and this reply was held to be incorrect. As *Duquesnel's* crystallized *aconitia*, the most active form of this alkaloid now known, has been given by members of the New York Therapeutical Society, in cases of *tic douloureux*, to adults, up to $\frac{1}{8}$ grain, we hold that the candidate's reply, if he referred to the common commercial article, was not very wide of the truth. Under present circumstances, in view of the uncertainty which now exists, any specimen of the alkaloid, the strength of which is not known, should be given in the minimum doses until its physiological powers are accurately gauged.

PRIVATE HOSPITALS FOR THE INSANE.

WE have watched, with no little interest, the newspaper reports, the charges, the published correspondence, and the legal proceedings in the case of Miss Grant, lately a patient in Dr. Livingston's private hospital in this city. We do not propose to consider the question of Miss Grant's sanity, or of her medical or personal treatment. The coroner's inquest shows she died of congestion of the brain, and not of maltreatment, as had been asserted; and we dismiss, as utter nonsense, all the sensational de-

scriptions of the reporters as to her being "drenched with narcotics" by "brutally plunging the hypodermic needle into her quivering flesh."

There is a much higher point involved—one of the greatest possible importance to the medical profession and to the public, viz.: Is it wise, or indeed legal, to confine insane or partially insane patients in private hospitals or homes, without the sworn certificate of two physicians, as is required in the case of public hospitals?

Dr. Livingston claims, and says that the claim is founded upon the opinion of "eminent legal counsel," that he can admit whom he will to his hospital without any sworn certificate of insanity. As shown by Miss Grant's case, he restrains such patients of their liberty, and admits their friends or refuses them admission, as he deems best.

The abuses which such an interpretation of the law may render possible are so manifest and so serious, that we have no hesitation in saying that, if the law be as Dr. Livingston claims it is, it should be changed, and changed at once. The more public an insane hospital is, the less need for a certificate; the more private, and especially if euphemistically called a "home," rather than an "asylum," or a "hospital," the more necessary should such a certificate be.

To immure a sane man in such an institution as Kirkbride's, with its numerous attendants and visitors, and the consequent unavoidable publicity, is next to an impossibility. Yet all of us have seen cases—especially those involving family differences and questions of property, as in Miss Grant's case—in which the courts, though often unwisely, have opened the door to the asserted lunatic.

But what is to hinder any unprincipled Doctor from calling his house a "home," and shutting up therein half a dozen people asserted to be insane; or even more easily it may be a single patient, whose relatives may be refused admission, or may even be ignorant of his whereabouts, and therefore unable to obtain redress by the law, while the patient himself is hopelessly without means of escape either physical or legal? There is no inspection of the home save by its owner, whose self-interest is thoroughly enlisted against the patient; no provision for free access to the outside world through the mails; not even a board of managers to act as a check upon its iniquitous chief. There have been too many suspicions aroused of late years, unfounded though they generally are, as to what goes on behind the bars, to make it wise that entrance into such homes should be made easier and exit harder.

Nor do we believe it to be good law, for the statute makes no distinction. Call it hospital or call it home, unless I am sworn to be insane, who dare say me nay when I wish to lift the latch? Were any dis-

tinction made, as we have said, it should rather be the more stringent the more private the institution is, unless we wish to establish in this country the mad-houses Charles Reade exposed, and thus efficiently aided in their destruction.

We know that much may be said seemingly on the other side, and with force and justice. There are cases, and not a few, that are on the border line twixt reason and madness, persons who know so well their surroundings that the moment they are placed in a mad-house their little remnant of self-control vanishes and sanity is lost. In a private hospital, under sufficient restraint for treatment, and yet not barred and locked in along with recognized lunatics, they may often recover.

There are cases, and not a few, in which none of us is willing to give a sworn certificate of insanity, and yet eccentricity is passing into such extravagance as to threaten soon to get beyond the bounds of reason, often with suicidal possibilities, which every now and then ripen into shocking realities. For these cases just such a home is needed temporarily, and it will not seldom effect the happiest cure.

But we believe the many evil possibilities of such "homes" will far outweigh any advantages, great though they may be, in individual cases. Hence, we feel called upon to protest most earnestly against any interpretation of the law which makes such abuses possible.

So far as Miss Grant's case is concerned, though her family and financial relations have made it peculiar, there seems to be no reason to doubt her insanity or Dr. Livingston's integrity. It is the principle, not the man; the practice, not the patient, we have wished to consider.

It would to a great extent obviate many of the difficulties noted above if our laws were more like those of England. The certificate in this country simply states that the medical men believe the patient "to be insane." In England the certificate requires the facts on which this conclusion is based to be given, and distinguishes in two categories the facts observed by the examiner and those communicated to him by others. The two medical men must not be partners, must have no direct or indirect interest in the asylum in which the patient is placed, and their examinations must be made separately.

The law recognizes not only public hospitals and asylums, but also "Licensed Houses," some of which receive only males, others females; some only quiet and harmless cases, others are for certain specified cases only. But every one of these houses or "homes" is carefully inspected by the "Lord Chancellor's Visitors of Lunatics." Two physicians, for two years unconnected with any institution for lunatics, are appointed from time to time. They must be in

actual practice when appointed, but relinquish it on accepting the position of Visitor. Their salaries are \$7500 each, with travelling expenses and a pension after twenty years' service, having reached sixty years of age, or being permanently disabled.

Such "licensed houses" provide quiet and safe retreats for many a case that would in an ordinary hospital go from bad to worse. The restraints of the law seem to be ample to prevent flagrant abuses while giving scope for a useful function.

THE MEDICAL NEWS COMMISSION ON VACCINE FARMS.

THE enormously increased demand for vaccine virus during the last few years, due to a wider popular appreciation of the value and safety of vaccination, and to the recognition by boards of health throughout the country of the necessity and economy of dispensing the virus at little or no cost, and in large quantities, has rendered all matters connected with its production exceedingly interesting, not only to the profession, but also to the general community.

In consequence, partly, of this greatly augmented demand necessitating a regular and abundant supply, and partly of the prejudices which have arisen against the use of humanized lymph, bovine virus has largely supplanted the latter, and, indeed, over extensive districts is employed to its almost entire exclusion.

The propagation, preservation, and delivery of this virus have, therefore, become a not unprofitable business, in which many individuals are engaged and much capital invested, and in which, as in other money-making occupations, the constant temptation exists to increase the gains by diminishing the labor and skill employed, or by diluting or adulterating the product. That this is not always successfully resisted is now well understood by every physician of experience, few of whom have not been annoyed by attempts at vaccination which were either entirely nugatory, or, still worse, were followed by erysipelas, cellulitis, or septicæmia.

In view of these well-known facts, and in the interest of both physicians and patients, it has been thought desirable to institute an examination into the condition and mode of conduct of some of the principal vaccine farms, in order that the results might afford reliable indications as to the character of the article supplied by them, any serious variation or deterioration in which may affect the health of lives of large numbers of people. To the practical importance of such information it is hardly necessary to call attention. To obtain it, skilled and competent inspection of each of the different establishments was required, as well as some collateral investigations by experts, all this, of course, involving the expenditure of considerable time, labor, and

money, which, however, THE MEDICAL NEWS has gladly undertaken for the benefit of its readers and of the community at large.

The first portion of the full report thus obtained will be found in our columns this week, and the report will be continued in our next issue.

WE hear rumors of dissatisfaction with the action of the Sub-Committee on Publication of the U. S. Pharmacopœia, with respect to the award of the contract for publishing the work. It is said that the instructions of the Convention have been disregarded, and that the contract was not awarded to the best bidder. We presume that the matter will be investigated by the Committee on Revision before confirming the report of its sub-committee, and we reserve further comment until the necessity for it shall appear.

At a meeting, on the 5th inst., of the New York Medico-Legal Society, a report was presented by Surrogate Calvin, Chairman of the Law Committee, on the Coroner's Office. We notice with pleasure that it favored the abolition of the present system of coroner's juries at inquests, substituting medical examinations by legally authorized physicians, with subsequent action by the proper legal authorities, according to the practice now in successful operation in the State of Massachusetts.

We trust that the same matter will soon be taken up in Pennsylvania, and the excellent Massachusetts system adopted here. It has been tested long enough now to show that it is a substantial and positive improvement on the ancient, or rather the antiquated, system of "crownor's 'quest law," which we expect before long to see abolished.

SPECIAL ARTICLE.

THE MEDICAL NEWS COMMISSION

ON THE

MANAGEMENT OF VACCINE FARMS AND ON THE PROPAGATION OF BOVINE VIRUS.

THE popular prejudice against vaccination with humanized virus—whether well founded or not we will not stop to inquire—has led to the employment of animal lymph almost exclusively. The widespread prevalence of small-pox in this country in 1871, '72, '73, and again during the last two or three years, has created an extraordinary demand for vaccine virus, to meet which, it is feared that many persons, possessing more enterprise than skill or knowledge, and with motives purely mercenary, have engaged in the business of producing so-called "bovine virus," which is wholly devoid of the power of inducing vaccinia. There appears to be no other way of accounting for the frequent failure and disappointment from the use of animal lymph, now so generally complained of by physicians. It is true, some allow-

ance must be made for the want of proper knowledge, on the part of many vaccinators, as to the peculiarities of dried animal lymph. It is said to be much less soluble than that from the human subject, requiring, therefore, greater care in its preparation before insertion. But in the hands of experienced and careful vaccinators, when due regard is paid to securing a perfect solution of the dried lymph, and its most skilful insertion, still failures, and even spurious results, are far more common than we are led to believe they should be if strictly pure and active animal lymph were used.

Concerning the susceptibility of the human subject to animal vaccine, Dr. Warlomont, Director of the State Vaccinal Institution at Brussels, writes,¹ "I answer, unhesitatingly, that it is equal, if not superior, to that for humanized vaccine." When the calf lymph is inoculated direct, taken from good pustules of the proper age, no other failures are known but those resulting from the manipulation of the operator. Out of three hundred children thus vaccinated by myself since May 1, of this year (1881), not one puncture—and I say, advisedly, puncture, because with living vaccine I consider it unnecessary to use scarification—has failed to produce good pustules.

"With regard to preserved vaccine, I shall content myself with reproducing the following statistics: In 1870 and 1871, thirty-three of the most reliable physicians in Belgium have reported to me the results obtained by them in vaccinations and revaccinations, by means of calf lymph on points sent out by the State Vaccine Institute of Brussels. The results are: 1. In vaccinations, out of a total of 500 cases there were 479 successful, being at the rate of 96 per cent. 2. In revaccinations, out of a total of 5,448 cases there were 3,419 successes, being at the rate of 62 per cent."

A prominent authority in America on animal vaccination says that, since he has made himself thoroughly acquainted with the peculiarities of animal lymph, "a failure in primary vaccination of infants is a very uncommon event." And in revaccination his results are "very exactly seventy-three per cent. at the first attempt."

The inability of the most skilful vaccinators of Philadelphia, and elsewhere, also, it is believed, to obtain such favorable results, or any very near approach to them, by the use of virus procured from apothecaries, points conclusively to the virus as being in some way faulty. With the view to ascertain, if possible, the reasons for the unreliableness of such a large proportion of the animal virus now being propagated and sold, it seemed desirable that an investigation should be made, into the management of the various vaccine farms, and for that purpose THE MEDICAL NEWS organized a COMMISSION, whose report is herewith given:

THE VACCINE FARMS ABOUT BOSTON.

The first establishment which we visited was that of Dr. Henry A. Martin & Son. The members of this firm reside in Boston, but their stables and operat-

ing-room are located in Brookline, a beautiful village adjacent to, and almost surrounded by, Boston. The stables are well built, well ventilated, and in excellent sanitary condition. The operating-room was also neat and tidy, and well adapted to the purpose. The entire management of the business, from the selection of the animals to the collection and packing of the lymph, is under the immediate supervision of the members of the firm, the junior member, Dr. Stephen C. Martin, giving his undivided attention to the business.

It is well known to the profession that to Dr. Henry A. Martin belongs the credit of introducing into this country the vaccination of animals as the means of supplying bovine virus for general use. In 1870 he sent a special agent to France for the purpose of procuring some of the Beaugency "stock" of virus then being propagated by Prof. Depaul. His agent returned home in September of that year, bringing with him an abundant supply of animal virus, and also several pamphlets and publications by Depaul, replete with instructions on the subject of animal vaccination. Having secured a herd of young healthy animals, Dr. Martin at once began the propagation of animal lymph, and, with considerable care and skill, he has been able to maintain the same "stock" of virus by transmitting it from one heifer to another, through an unbroken series to the present time.

The history of the Beaugency virus dates back to March 28, 1866. On April 26, it was reported to the Academy of Medicine of France that a case of casual or spontaneous cow-pox had been observed at Beaugency, a town in France. Prof. Depaul, "Directeur de la Vaccine," promptly repaired to that town, and saw, as reported, a young milch cow, thirty months old, in which the disease had appeared. The milker of this cow had noticed (March 28) that the animal was less gentle than usual, and presently a French midwife observed vesicles on the udder which bore a striking resemblance to vaccine vesicles, with which she was very familiar. This midwife, a veterinary surgeon, and four physicians of the town closely inspected the animal, and found seven or eight vesicles on the udder at the base of the teats. In the same stable was another cow, but she bore no evidence of the disease. A horse in an adjoining stable, separated only by a very thin partition, was carefully examined by the veterinary surgeon, but failed to present any symptoms of grease, or any other disease. With the view of testing the genuineness of the cow-pox in this case, these four physicians, the veterinary surgeon, and the midwife, decided to inoculate another cow and two children with some of the fluid virus taken from the vesicles. Accordingly, a cow aged three years, and two infants only a few months old, were vaccinated. The operation was successful in all three, being followed by perfectly typical vesicles at every point of insertion.

Subsequently, M. Brechemeier, in company with several other physicians, visited Beaugency, and saw only cicatrices on the original heifer, but on the second, six crusts, a number equal to that of the insertions of virus, were found. Two of these were

¹ British Medical Journal, Nov. 12, 1881.

removed, and on his return home to Orleans, Breche-meier vaccinated a calf with them, obtaining out of six insertions only one vesicle, but that one was perfect and characteristic. From this single vesicle, a third calf, aged five months, and several children were successfully vaccinated. This calf was seen by Depaul, and he was satisfied that the vesicles were perfectly characteristic. From these vesicles Professor Depaul vaccinated a calf, and on the next day (April 31st) departed with his heifer for Paris. With the lymph obtained from this calf, Depaul began the systematic propagation of bovine virus.¹

Dr. Martin says, "The virus brought to America was from the 258th, 259th, and 260th animal of Dr. Depaul's series, beginning with the heifer of Beaugency. It may be worth while to state the great probability that in America only has the 'stock' of Beaugency virus been perpetuated.

"During the Franco-Prussian war and the siege of Paris, vaccination of animals ceased in that devoted city for most evident reasons. In November, 1873, Prof. Depaul assured me that the virus carried from Paris by my agent, in 1870, was the last that left the city, and that, during the siege, the 'stock' was lost. The animal virus employed since the war is from other stocks discovered since that of Beaugency, and substituted for it for no good reason, as will be shown in another part of this report. No comments need be made on pretended 'importations' of Beaugency virus since the Franco-Prussian war."

It will be seen further on that two or three of the producers claim to have imported some of this "stock" of virus since the Franco-Prussian war. We think it quite probable that all the true animal virus now being propagated in this country has descended from that originally introduced by Dr. Martin. Of course we should except a recently-discovered "stock" known as the Cohasset.

In February, 1881, a case of casual or so-called spontaneous cow-pox was observed at Cohasset, a small town in Massachusetts. This came to the knowledge of Dr. Martin, but he was at first somewhat incredulous concerning the true nature of the disease, having been so often disappointed in similar reports. At last, however, he concluded to visit the locality and inspect the animal. To his surprise, he found that the disease in the cow bore a very striking resemblance to true cow-pox. He procured some of the virus from the vesicles, returned home, and with it inoculated a heifer. The result proved successful, as the vesicles which developed were perfectly characteristic. With virus taken from this heifer he vaccinated an infant, and vaccinia developed and pursued so regular and typical a course that the genuineness of the virus was considered proved beyond all question. Since then Dr. Henry A. Martin & Son have continued to propagate the Cohasset stock of virus, as well as the Beaugency, keeping the two "stocks," however, entirely separate.

For the production of the very best lymph, Dr.

Martin prefers calves ranging from six to eighteen months old. The calves should be healthy and entirely free from any skin disease. Heifers somewhat older are sometimes used, but never after they have borne a calf. Dr. Martin objects to using old cows, because, he says, the virus taken from them is liable to make very sore arms.

The inoculations are usually made on the hinder part of the heifer, on and underneath the labia, extending downwards toward the udder. A space on one side of the animal, near the flank, is also used. Of course, before the inoculations are made, the hair is thoroughly shaved from the localities to be inoculated.

From fifty to eighty inoculations are made on one heifer, and with a good yield of lymph, from 3000 to 4000 ivory points may be charged. The period for the collecting of lymph is commonly from the seventh to the ninth day of the vesicle, though experience alone must determine this point, for the vesicles do not always run the same course in all animals. Experience, knowledge, and, we may add, *honesty*, also, are needed to determine a propagator when to cease collecting; for virus taken after a certain time, and after a certain amount has been secured, is quite certain to prove inert. Unscrupulous producers have been known to collect serum, not virus, from an animal long after the pure lymph of the vesicles had been exhausted. This, doubtless, is one very common cause of the frequent failures in vaccination by what is supposed to be animal lymph.

Dr. Martin & Son rarely collect lymph in any other way than on ivory points. They do not recommend capillary tubes as a means of collecting and preserving lymph, and strongly advise against the use of crusts. When the ivory points have been well charged—dipping them once in pure and active lymph is always sufficient—and when the lymph has thoroughly dried, they are put up in small packages, and carefully guarded against the moisture in the atmosphere by being first wrapped in cotton, then in tissue-paper, and then, to make them perfectly air-tight, in a covering of thin, tissue-like gutta-percha. The packages are then placed in a refrigerator until they are required for use. Concerning the preservation of virus, this firm says, "Keep it dark, dry, and cool, no matter how cold, or indeed how many degrees below zero, but avoid great heat, even when dry, or any degree of heat and moisture."

The "lancet-shaped ivory vaccine points" are the result of the inventive genius of Dr. Martin. They are now very generally used in this country, and to a considerable extent in Europe. Dr. Warlomont says of them, "Much is said, and justly, at the present, of American points, with ends sufficiently sharp to effect the direct introduction of the vaccine without the aid of the lancet. These points display the perfection of workmanship, and I prefer them, on that account, to all others—notwithstanding that, for the preliminary abrading of the skin, I should always give the preference to instruments made of metal."

Dr. Martin's operating table seems admirably adapted to the purpose for which it is intended. The

¹ These facts are gleaned from Dr. Martin's Report on Animal Vaccination to the American Medical Association in 1877.

top of the table is fastened to the framework in such a way that it may be made to assume either the perpendicular or the horizontal position. When an animal is to be operated on, the top of the table is brought to the perpendicular, the heifer is led alongside of it, securely fastened, and then the top of the table is tilted back to the horizontal position, carrying with it the heifer, which now lies quietly and comfortably upon its side, ready for inoculation, or collection of lymph, as the case may be.

During the period of cow-pox in the animals, they are stabled and well fed. Their value is not affected by having undergone the disease. On the contrary, some stock-farmers are of the opinion that the inoculation renders them less liable to some of the diseases which occasionally prevail among cattle.

Concerning the proper method of using dried animal lymph, Dr. Martin & Son, in their circular to the profession, give directions that are of the utmost importance. They particularly emphasize the necessity of securing a thorough solution of the lymph. They say, "The animal vaccine virus, or, rather, the animal albumen in which it is contained, is not nearly so soluble, either in water, or blood, or serum, as the humanized, and *much greater* care is necessary to ensure its perfect solution than is at all necessary with the old (humanized) lymph." And again, "If the albumen on the points is not dissolved and fully applied to the incised surfaces, vaccination will be often futile, however fresh and vigorous the virus." With such and other necessary precautions, "Dr. Martin does not remember a case of failure in many hundreds of primary vaccinations of adults which he has made; nor, now that he *insists* on thorough work, notwithstanding the shrinking of babies and sympathetic mothers, does he have any failures with infants; nor does he *hear* of any such when sufficient care and a little time are taken."

Statistics showing the efficacy of the virus produced by this firm have been published by a committee appointed to superintend the public vaccination of the citizens of New Haven, Conn. According to the report of this committee, 2381 primary vaccinations were performed, of the number in which the result was ascertained, 88.5 per cent. were known to be successful. 678 of the number did not return for inspection, presumably because they had been successfully vaccinated. If an inspection of the entire number could have been made, the percentage of successes would no doubt have been found to be still greater. 2362 revaccinations were performed (no child under twelve years of age having a good cicatrix was revaccinated), with the result of 77.1 per cent. of successes.

Very frequently complaints are made of the tinge of blood on the points issued by Dr. Martin & Son. When in their operating-room and witnessing the vaccination of a heifer, we noticed that they used in preference the points that were most bloody—probably because they were less salable, but they were evidently not less efficacious. In order to correct the erroneous impressions entertained by physicians on this point, the firm has issued a circular in which it is claimed that it is utterly impossible to charge a single *ivory* point with virus *direct* from the

heifer without its having a yellowish or reddish tinge, due to more or less admixture with blood, and that, if there is any choice, the reddish points are the best.

(To be continued.)

REVIEWS.

A MANUAL OF OPHTHALMIC PRACTICE. By HENRY S. SCHELL, M.D., Surgeon to Wills' Eye Hospital, etc. 12mo. pp. 263. Philadelphia: D. G. Brinton, 1881.

The year 1881 has been fruitful in the production of books upon ophthalmic medicine and surgery, three having appeared almost simultaneously at the close of the year. Of these the manual of Schell is the smallest, being intended probably for students and general practitioners. It consists of two hundred and sixty pages, clearly printed on slightly tinted paper, and contains fifty-three illustrations on wood. It is divided into fourteen chapters, the first of which treats of the anatomy and physiology of the eye. In this chapter are to be noted several inaccuracies and insufficient definitions, which mar its appearance. It is not strictly accurate to say that the retina "encloses the vitreous humor," or that the "ciliary ligament is the ring of fibres which joins the iris, cornea, and sclerotic, in which is the minute sinus known as Schlemm's canal." The illustrations are in the main fairly good, but on page 70 is a very bad representation of a symblepharon, which is a great blemish.

In the chapter upon the ophthalmoscope, the author fails to recognize Loring's priority in devising the very convenient, modern instrument, now used so extensively in this country, as well as the general superiority of his instrument over others. The chapter on "Refraction and Accommodation" is sufficiently explicit, but the definition of the visual angle is incorrect. We are glad to see that the author emphasizes the importance of the use of atropia in testing satisfactorily the actual refractive condition of an eye, and also that he recognizes the part played by the condition of the nervous system in so frequently exaggerating asthenopic symptoms. In the treatment of paralysis of the ocular muscles, we question the value attributed to the internal administration of iodoform. The remarks on what Schell calls "reflex asthenopia" are briefly, but clearly, expressed; and this is a subject of some importance. In speaking of the operation of tattooing the cornea in opacities of this membrane, for its cosmetic effect, the author makes no reference to the fact that these artificial stainings wear away in process of time, are not of long duration, and the operation must be repeated. The description of the operation of abscission of the cornea for total staphyloma is incorrect in terms, and needs modification. We are glad to see that the author opposes the use of chloroform in ophthalmic practice, on account of its danger to life, as we consider this most sound advice.

In the therapeutics of optic neuritis the author is not sufficiently cautious in his administration of mercury. We also dissent from his definitions of the terms amblyopia and amaurosis.

The aim of the author has evidently been to make a concise, practical manual, and in this he has probably succeeded, but we question the real value of all manuals in medicine as aids to knowledge, for the information thus gained is apt to be faulty, and is always insufficient. That, however, there is a place for such manuals in our literature is demonstrated by the frequency with which they appear, and it is, perhaps, too much to expect the average, busy practitioner to possess more than a very superficial knowledge, in these times, of the many subdivisions of our science.

SOCIETY PROCEEDINGS.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Stated Meeting, April 5, 1882.

W. S. W. RUSCHENBERGER, M.D., PRESIDENT, IN THE CHAIR.

DR. GEO. C. HARLAN reported *Two Cases of Congenital Irideremia, with Lamellar Cataract in one and Dislocated Cataractous Lenses in the other.*

CASE I.—N. J. M., aged 12, says that he knows of no defect in the eyes of any other member of his family in this or preceding generations, except that his mother is "short-sighted." He is of medium size, and, except his eyes, well developed.

His vision is $\frac{3}{60}$ and is not improved by glasses or the stenopaic hole. There is no photophobia, and he sees better in a bright light than in a subdued one. The corneae are clear, but perhaps very slightly below the normal size, though a constant and decided nystagmus makes it impossible to measure them accurately. The eyes are free from irritation, and their tension is normal. There is not a vestige of iris in either eye. There is well-marked lamellar cataract in both eyes. In each lens there are two opaque layers with clear lens matter intervening between them, beautifully seen by oblique illumination. Only occasional and partial glimpses of the fundus can be obtained, but the choroid seems normal. There is not sufficient vision for any satisfactory test of the accommodation.

CASE II.—I. B., a well-grown boy of thirteen years, has rather prominent eyes, with full-sized corneae, and normal tension, but the iris is entirely absent in both. In the right eye the cornea is quite clear, and, though there are floating opacities in the vitreous, the details of the fundus can be seen fairly well. The lens, which is of normal size, is opaque and white, and is dislocated upwards, so that only about its lower half is seen beneath the corneo-sclerotic junction. The ophthalmoscope shows a hypermetropia of $\frac{1}{6}$, which, assuming $+\frac{1}{4}$ to represent the loss of refractive power induced by aphakia in the emmetropic eye, indicates a structure of the ball corresponding to a myopia of $\frac{1}{4}$. The choroid and retina appear normal in structure, but the optic disk is atrophied and greatly distorted, the vertical diameter being twice that of the horizontal, and the retinal vessels crowded to its inner edge; vision is only quantitative. There is no nystagmus.

In the left eye there is a diffused haziness of the cornea, which, together with a greater opacity of the vitreous than in the other eye, makes the details of the fundus invisible. The lens, which presents the same form of cataract as that in the right eye, is still further out of position, and only a narrow edge of its periphery extends below the margin of the sclerotic. The lenses seem to be held in their unnatural position by some attachment of their upper margins, while the lower are free, and they swing backwards and forwards, as if on hinges, with the movements of the balls. In the left eye the lens has caused an absorption of the tissues, against which it rests until the choroid has disappeared from above it and the sclerotic is very much thinned and slightly staphylomatous. When the cone of light concentrated by a convex glass is thrown upon it from below, the outlines of the lens become distinctly visible through the sclerotic.

In commenting on these cases, Dr. Harlan said that though irideremia (iris and eremia, absence), or aniridis, is an extremely interesting anatomical curiosity, it can scarcely be said, in the present state of our knowledge, to teach any useful lesson in embryology or pathology. Numerous hypotheses have been suggested

to account for its occurrence, but most of them are more fanciful than philosophical, and perhaps none of them are more rational than that maintained long ago by Von Ammon, who, in view of the late appearance of the iris, after the choroid is fully formed, considered its absence as simply the result of an arrest of development of the uveal tract. It is a curious fact that this anomaly is almost invariably symmetrical. According to Manz (*Handbuch, Augenheilkunde*, II., p. 90), but one case has been reported in which it occurred in one eye only. Another point of interest in the history of this defect is its decided tendency to hereditary transmission. A number of cases of inheritance have been reported; one (quoted from Von Ammon by Lawrence) in which one member of the first generation was affected, three of the second, and five of the third.

The fact that cataract is very generally associated with irideremia, has given some support to a suggestion that the iris is concerned in the nourishment of the lens: and to an ingenious theory of the causation of irideremia which supposes that the iris has been crowded out, as it were, by the lens remaining too long and too closely in contact with the cornea during embryonic life. This coincidence of cataract with irideremia is, however, not constant, as cases are recorded in which the lens was transparent. One is reported by Dr. Reuling (*Am. Journ. Med. Sci.*, January, 1875), in which vision was sufficiently acute to enable the observer to determine that the power of accommodation was unimpaired.

The normal intraocular tension found in cases of irideremia has been adduced to prove that the aqueous humor is not secreted by the iris, but chiefly, if not entirely, by the ciliary processes. In the rabbit the ciliary processes are connected with the iris, and when both are removed, the eye becomes very soft and the aqueous humor is never regenerated (Deutschman, *Gräfe Arch.*, v. 26, No. 3). This, so far as it goes, gives support to the advocates of sclerotomy, instead of iridectomy, in glaucoma.

Partial congenital luxations of the lens are usually upwards, as in Case II., and frequently occur without defect of the iris. In the left eye of this patient, the lens is so far out of place that it would be entirely concealed if the iris were present, and this case might then be readily mistaken for one of the very rare anomalies of congenital aphakia.

Dr. W. F. NORRIS said that, through the kindness of Dr. HARLAN, he had had an opportunity of making an examination of the eyes of the patients whose cases have been described. On first inspection of one of the cases, he thought he could detect a slight peripheral remnant of the iris, but more careful examination, aided by the ophthalmoscope and oblique light, showed that every vestige of iris was wanting, and that this appearance was due to the shadow cast by the limbus and conjunctivæ corneæ on the periphery of the anterior chamber. It has occurred to him that at least some of the cases which have been reported in the older books as partial irideremia, might possibly be due to this similar appearance in the days when the above-mentioned methods of examination were unknown.

Dr. JOHN M. KEATING read *A Report of a Case of Malaria, in a Child aged Twenty Months, in which Morbid Enlargement of Liver and Spleen occurred; and also of a Case of Aortic Stenosis and Regurgitation with Atheromatous Aorta in a Woman aged One Hundred and Three, and exhibited the Specimens.*—He gave the statement of the mother, as throwing some light on the antecedent history of the child from whom the interesting pathological specimens were taken.

CASE I.—M. N., aged twenty-six, married, entered the obstetrical wards of the almshouse two years ago, shortly after her arrival from Ireland. Little more than

a month after, July 24th, the child was born. She remained in the house one year, and went to Wilmington, Del., to live. Shortly after her arrival there, in July of last year, she was seized with chills; she states that she lived in a swampy locality, and that everybody living in the neighborhood suffered severely from intermittent fever. She states that the malarial paroxysms were not of the usual type, the disease being often of a cerebral form, accompanied by violent headaches, which compelled her to place ice to the head, and that she was at times delirious. The attacks came on daily for several days at a time, commencing at four o'clock in the afternoon. She nursed the child until its death. About two weeks after the mother was first affected, the child began to fail—it exhibited the same symptoms as the mother. Its attacks would come on about four in the afternoon. The ears became cold, finger-nails blue, there would be vomiting, followed by frequently loose stools of a green color, and containing a great deal of mucus; at times constipation would exist for days, to be followed by stools of a chalky color. There were no convulsions; no strabismus. Child always nursed well, and the mother always had plenty of milk. On the 15th of October following, the child being fifteen months old, she again sought admission to the hospital. Upon admission the mother showed a marked malarial cachexia, which was equally noticeable in her infant. The mother was placed upon iron and quinia in large doses, followed by cod-liver oil, upon which she rapidly improved. Her milk was examined microscopically, and found to be normal. On examination of the child, attention was immediately attracted to the abdomen, which seemed to be unusually enlarged, especially upon the left side; this was found to be due to an enlarged spleen, which extended from the normal area of splenic dulness down to the crest of the ilium, its anterior edge terminating in a ridge, about an inch to the left of the umbilicus. The mother had not noticed this ridge until her admittance to the house. The liver was also found to be enlarged, and the intestines were unduly distended with gas. Every effort was made by treatment, both constitutional and local, to reduce the liver and spleen to their normal size, and for a time we thought our efforts would be successful, as the lower border of the spleen became separated from the ilium by a line of tympanic resonance. The malarial attacks were checked by suppositories of quinia, but the use of tonics and judicious diet had little effect upon its nutrition. The child died March 5, 1882, aged twenty months. Post-mortem examination gave the specimens, which were exhibited. The liver weighed nineteen ounces, and the spleen fourteen ounces.

There was no history of syphilis in this case. Dr. Formad expressed the opinion that the enlargement of the spleen was that of simple hypertrophy of the congested organ, due to malaria, the enlargement of the liver being due to fatty change; the specimens, on this account, are of great interest.

CASE II.—Mary Anderson, aged 103, was admitted to the old colored woman's ward January, 1882. About three weeks after admission she suffered from an attack of bronchitis, which persisted more or less until her death; while treating her for this affection, attention was called to her heart, which was found to present a well-marked, double aortic murmur, *i. e.*, regurgitant and obstructive, also a slight mitral whiff, probably regurgitant. She presented no lesion of any other organ, complaining only of slight rheumatic muscular pains.

The patient was well nourished, appetite good, cerebral condition fair. She continued in the above condition, gradually failing, until death, which occurred March 22, 1882.

Post-Mortem.—Lungs: Bronchitis well marked over both lungs; the bronchial tubes and bronchioles exud-

ing pus, upon pressure, in noticeable amount. At the right apex were a few masses, which had undergone calcareous degeneration, cicatrization, and puckering. The point at which they were deposited was drawn into a stellate mass attached to the pleura. *Heart and Aorta:* Upon removing these organs they were found to present a very interesting condition of atheroma, due to the age of the patient and the unusual duration of the disease, which enables us to study it in what may be termed its last stages. The aortic valves showed atheromatous changes, the middle leaflet being almost solid at its base; the aorta was dilated and thickened, with atheromatous deposit almost concentrically surrounding the vessel; portions of this, when detached, were like thin sections of solid slate. Along its course, six inches from the aortic valve, there was a large patch of ulceration, on which blood had collected into a firm, organized clot, thus preventing rupture. The coronary arteries could be felt like twigs of wood in the heart muscle.

The interest of this case lies in the fact that the supposed great age of this patient was arrived at by the absence of laborious occupation, and the fact that, with the nature of her heart lesion, sufficient compensation had been established to carry on life, no extra strain having been placed upon the heart's power. This case is an interesting study in prognosis.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, April 6, 1882.

THE PRESIDENT, EDWARD L. DUER, M.D., IN THE CHAIR.

Removal of the Uterus for Fibroid Tumor; Death; Autopsy.—DR. E. E. MONTGOMERY reported the following case which had been under his care at the Philadelphia Hospital.

Sarah B. (colored), æt. 46, widow, native of New Jersey, of temperate habits, has been an inmate of the Philadelphia Hospital for nearly three years. She entered the gynecological ward about the last of February, soliciting the removal of a large abdominal tumor.

The establishment of her menstrual function was attended by severe hæmorrhage, but soon became regular. The menses ceased at one time for five years. She has not menstruated for two years. She was never pregnant.

The growth of the tumor, which began eighteen years ago, she attributed to a kick in the abdomen from her husband. The tumor soon acquired great size, filling up the abdomen and pressing against the diaphragm, causing great distress.

She has been treated by means of hypodermic injections of ergotine, and later by the earth treatment. The latter was followed by a slight reduction, possibly due to the rest in bed. When she came under my care, the abdomen was more prominent than if at full term of pregnancy. Owing to the woman's emaciation and the loss of muscular power in the walls of the abdomen, the mass had settled down into the lower part of the cavity, encroaching but little upon the portion above the umbilicus. A fluctuating surface, evidently the bladder, covers the whole of the lower face of the mass. The tumor was regular in outline and about equal in size on either side of the median line. At the upper part of the right side could be felt a smaller, loosely connected mass, between which and the tumor the percussion was resonant.

The abdominal walls were freely movable over the tumor, but the latter could be raised or moved from side to side only to a limited extent. Examination per vaginam disclosed the whole uterus involved in the

mass which rested upon the pelvis. The sound could be passed five inches into the uterine canal along the posterior border of the tumor. The posterior lip was thin.

We evidently had a fibroid tumor which had originated in the anterior wall of the uterus, and had drawn the bladder up with it as it grew.

In view of the large size of the mass, the anxiety of the patient for its removal, and her general condition, it was decided after a staff consultation to make an exploratory incision, and, if the adhesions were not extensive above and posteriorly, proceed to the complete removal of the tumor and uterus.

The patient was kept quiet in bed one week and sulphate of quinia three grains, tincture of the chloride of iron thirty drops, were given three times a day. The bowels were regulated by the use of compound liquorice powder. The urine, examined by one of the resident physicians was found alkaline, and contained no albumen.

Operation: March 17, assisted by my colleagues, Drs. Duer, Warder, Parish, Musser, and Hatfield, I proceeded to perform the operation under antiseptic precautions, using thymol spray. An incision three inches long was first made down to the tumor and the hand introduced; no adhesions were found above and but one band posteriorly. The bladder was spread out over and closely adherent to the tumor anteriorly. The opening was now extended to the symphysis below and the umbilicus above, and the tumor with some difficulty lifted through. The peritoneal covering of the tumor was burned through with Paquelin's thermocautery, and the bladder dissected off. The capsule was then raised on either side, permitting ligatures to be passed beneath the broad ligaments. The lower portion of the cervix was then tied in two sections, both surrounded by ligatures, and the mass removed. Although the hæmorrhage had not been excessive, the condition of our patient now became critical. The pulse was very feeble, indeed scarcely perceptible; respiration infrequent and sighing. It was only through the persistent care of Dr. Parish in the use of hypodermics of whiskey and ammonia, and hot water applications over the chest, that she survived until the wound could be closed. She was placed in bed and surrounded by hot bottles, ergot and digitalis were given hypodermically, and whiskey by the mouth and rectum; but without counteracting the effects of the shock. She died two and a half hours after the operation.

At the *autopsy* a couple of ounces of bloody serum were found in Douglas's cul-de-sac. The kidneys were small, soft, flabby, and upon being opened were found dilated into sacs, their structure being largely destroyed. One was full of pus. The ureters were greatly dilated. They were not injured in the dissection for the removal of the mass. The heart was contracted, pale, and empty of blood. The ligatures had been applied around the cervix one and a half inches above the os.

The tumor was a solid mass weighing sixteen pounds, its longest diameter laterally, quite regular in outline, presenting from the right upper surface a smaller mass with an elongated pedicle.

Aside from the necessity of placing such cases upon record to obtain correct statistics, it is of special importance as an illustration of the advantage to be derived from a careful study of the condition of the renal organs previous to the operation, and the increased gravity given by any symptoms that would cause us to suspect a renal lesion. We made no microscopical examination of the urine, so the presence of pus escaped notice, though its presence should have been suspected from the alkalinity of the urine.

DR. B. F. BAER considered the examination of the

urine a very important point, as albuminous or purulent urine is always a sign of danger.

DR. H. BEATES remarked that, in testing for albumen in urine by means of Heller's test, he had noticed a singular fact in some instances where the urine was alkaline or but very faintly acid. If the acid was added to the urine before boiling, no precipitation occurred, but by reversing the test, boiling first and adding the acid afterward, the presence of albumen was shown.

DR. MONTGOMERY, in closing the discussion, remarked that, although at the autopsy one kidney was found full of pus, none had ever been observed in the urine. This was perhaps due to occlusion of the ureter from pressure by the tumor. If pus were present in small quantity it might be considered to arise from cystitis from pressure on the bladder. But if urine is repeatedly found to be alkaline when no alkalies have been administered, it would indicate the presence of pus, although none were found.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 6, 1882.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

AFTER the reading and approval of the minutes of the last meeting, the President announced the presence of Dr. J. W. Thompson, of Kentucky, and Dr. Stanton, of North Carolina, as guests of the Academy, and invited these gentlemen to take seats upon the rostrum.

Dr. John G. Adams, Corresponding Secretary, reported the receipt of an invitation from the Secretary of the Fourth International Congress of Hygiene, to the Academy, to send delegates to the Congress, which is to be in session from the 4th to the 9th of September, and he then moved that the Council of the Academy be empowered to appoint delegates. Carried.

In the absence of the Statistical Secretary, Dr. Adams further reported the death of a Fellow of the Academy, Dr. Ed. L. Beadle, in the seventy-fourth year of his age. Appropriate resolutions were offered and adopted, and Dr. Adams was appointed by the Chair to prepare a memoir of Dr. Beadle, to be read at the next meeting.

In accordance with a motion carried at the last meeting, the report, which was then read, of the delegates from the Academy to the Medical Society of the State of New York came up for consideration and action. The part of this report which is of general interest to the profession, is principally concerned with the new Code adopted by the State Society. When the report was read at the preceding meeting, there was no time for its discussion, as it was then past the hour for adjournment.

Upon its being again brought before the Academy, DR. AUSTIN FLINT said that he thought all would be agreed that the most important element of success and usefulness of the Academy is the fact that it has confined its attention exclusively to the advancement of medical science, and kept aloof from those subjects that may be distinguished as medical politics. He would not undervalue the wisdom of the topics referred to in the report. He had his convictions concerning them, others had theirs. There was no reason why the Academy should discuss any of these topics; they belonged to subordinate or co-ordinate sister societies, such as the County Medical Society, and, holding these views, he moved that the report of the delegates from the Academy to the Medical Society of the State of New York be accepted, and that the consideration of the topics involved therein be indefinitely postponed. Carried unanimously.

The next business was the reading of the scientific paper of the evening, by FESSENDEN V. OTIS, M.D., entitled:

Case of Persistently Recurring Spasm of the Bladder, Resulting in Thickening of its Walls, Dilatation of the Ureters, and Hydronephrosis. Death from Uræmia. Pathological Specimen.—As introductory to the subject of persistently recurring spasm of the bladder, Dr. Otis cited a few instances of certain leading features similar to it, and illustrative of some of the possible sources of error in the diagnosis and treatment of urinary difficulties.

A summarized history of the case which formed the subject of the paper is as follows:

Mr. Z., æt. fifty-seven, had suffered from frequent difficulty and more or less painful urination for over twenty years. His trouble began with an acute urethritis, which soon merged into a chronic form lasting some years. During this time, he passed through the hands of many distinguished physicians, who, from the symptoms, were led to make repeated examinations for stone. Painful urination continued, however, and he consulted both regular and irregular physicians and surgeons. Sir Henry Thomson, of London, and M. Civiale, of Paris, both examined the patient for stone, but with negative results. His frequent and painful urination continued, and his urine, at times, was bloody and always contained more or less pus. Patent medicines, medicinal waters, and spiritualistic agencies had all been tried without avail. For a few years past he had been under the general care of Dr. M. His sufferings increased to such an extent that surgical aid seemed imperatively called for. He was referred to a surgeon eminent in genito-urinary matters, who, also failing to find any stone to account for the cystitis, treated it by repeated washings, and the occasional passage of a number twenty-six sound into the bladder, which latter procedure, the patient stated, was the only thing that had ever been done for him that appeared to do him any good. After a time his sufferings increased and became complicated with malarial symptoms. It was now that Dr. Otis first called to see the patient. His general appearance was that of a man suffering from malignant disease. His urination, which occurred at intervals of fifteen minutes, was each time accompanied by an agonizing spasm lasting about two minutes. Spasm less frequent and severe at night. Complained of severe pain in region of left kidney. This had been of long duration, and surgeons had very generally attributed it to stone in the kidney. Pain during micturition always referred to neck of bladder. Urine showed no evidences of organic disease of the kidneys. Had never had pain in glans penis and only suffered during urination. Had long worn a urinal. Diet, chiefly milk. A careful general examination failed to discover any evidences of organic disease in the thoracic or abdominal regions. The urethrometer showed a normal calibre from the bulbo-membranous junction to within three-fourths of an inch of the urethral orifice, where the canal suddenly narrowed.

The repeated examinations of the bladder by distinguished surgeons, together with entire absence of pain in the glans penis, or any sudden stoppage of urine during the act of urination, satisfied Dr. Otis that, if there was any stone in the bladder, it was encysted, or probably would not be discovered by the use of the sound. It was also thought that the patient could not have lived so long had his trouble been due to organic disease of the spine or kidneys. Dr. Otis suggested the possibility of the difficulty being in a measure if not wholly of reflex origin, and due to the irritation of the contracted and thickened urethral orifice and proposed to test the truth of it by dividing

the meatus so as to make it correspond with the remaining portion of the canal. To this the patient finally consented, and the meatus and tissues extending back three-fourths of an inch were divided, and a thirty-seven solid sound passed well into the bladder. The operation was followed by incontinence of urine for three days, unaccompanied with pain. The patient was then seized with a severe attack of kidney colic (left side), which was relieved by a hypodermic injection of morphia. Twenty-four hours later he had another attack which was treated in the same way, after which he passed a comfortable night. Pus and mucus, which were present in great quantity at the time of the operation, steadily decreased. Spasm and pain in the bladder occurred more frequently. Patient was kept narcotized with morphia. Finally he refused opiate and declined beef enema, dying uræmic eleven days after the operation.

At the autopsy, which was made by Dr. Welch, both kidneys were found enlarged and with adherent capsules; cortical substance of nearly uniform grayish appearance; pyramids encroached upon by dilated calyces; no abscesses. Ureters dilated to nearly the calibre of the small intestines, and their walls thickened. No obstruction to passage of urine in kidneys or ureters. Wall of bladder thickened to about four times its normal diameter, the muscular coat being most affected. Bladder mucous membrane thickened, and presents slightly elevated, grayish patches such as seen in so-called diphtheritic cystitis. Capacity about normal; contents, ammoniacal purulent urine and a small calculus, about an inch in length and conical in shape, apparently of recent formation. Urethra and prostrate about normal. Microscopical examination of kidneys showed marked new growth of fibrillated connective tissue, which is infiltrated with lymphoid cells. Uriniferous tubes are in places compressed and atrophied, in other places dilated, and in still other situations filled with fatty epithelium. Cause of cystitis not apparent.

It will be seen from the above that there was no apparent mechanical obstruction to the passage of urine in the kidneys, ureters, bladder, or urethra, and yet the conditions found after death were such as to demand a mechanical obstruction to the exit of urine from the bladder to account for their existence. Hence, Dr. Otis was of the opinion, that the only possible solution of the difficulty is through the claim of a persistently recurring spasmodic closure of the orifice of the bladder, as a result of irritation reflected from some point in the urethra. The urethrometer, as previously stated, showed a narrowing of the urethra for three-fourths of an inch back from the meatus; this amounted to thirteen millimetres. The possible influence of a contracted meatus in producing more or less grave disturbances throughout the urinary tract has long been known, though not generally appreciated. It was mentioned by M. Civiale in 1850, and Sir Henry Thompson in 1858. In 1874 Dr. Otis first read a paper upon this subject.

In the case reported to-night, complete division of the contracted anterior urethral tissues, followed by introduction of the sound, unquestionably lead to relief from spasm of the bladder. Dr. Otis thinks we are warranted in believing that, if this condition and its possible effects had been appreciated at an earlier period in the life of the patient, and had been relieved, years of agonizing suffering would have been avoided, and his life might have been saved through an operation, in a surgical point of view, of the most insignificant character.

In conclusion, Dr. Otis thinks it must be admitted that symptomatic evidences of organic or idiopathic disease of the bladder and prostate, as well as of stone or other adventitious material in the bladder, should be

received with the distinct understanding that such evidences are possibly due entirely, or in part, to sources of irritation quite outside of the organs apparently the subject of disease.

Dr. ALFRED C. POST said he had been long satisfied that in many cases a contracted urethra, if not the cause of irritations, was a very important element in maintaining the same. This, he thought, was often the case in senile enlargement of the prostate. He had known cases in which catheterism was no longer necessary after dividing the meatus. A young man was sent to him from Massachusetts, a few weeks ago, with a close stricture of the urethra. Urine was voided in drops, and was accompanied with great distress. It was impossible to introduce a catheter into the bladder; but, by making a slight incision before and behind, a series of sounds, from fifteen millimetres up to thirty, were passed at intervals of two or three days. The patient returned home, entirely relieved from the difficulty from which he had been suffering.

Dr. E. L. KEYES remarked that he must differ with the author of the paper in regard to the etiology of the case reported. He thought, in the first place, that relief from spasm was due more to the introduction of the sound, and the consequent paralyzing of the urethra, than to cutting. Many cases, presenting the symptoms of stricture and stone, turned out to be of reflex origin. A large number of these undoubtedly recovered from the passage of sounds, unless the meatus was extremely small. Many cases undoubtedly recovered after the constricted meatus was incised, not because of the incision, but because of the introduction of the sound following the operation. Again, it was also true, in many cases where the use of a large sound had failed to afford relief, incising the meatus did not effect a recovery. Dr. Keyes cited a case of frequently recurring spasm, in which no pus was found in the urine, and the patient was perfectly healthy otherwise, though the spasm had lasted for years.

In the case presented to-night, he thought a reasonable explanation could be put forward, which would cover the ground as well as spasm, namely, that the patient arriving at a certain period of life acquired an urethritis. This was his first trouble, notwithstanding the long previous existence of a narrow urethra. Many similar histories were contained in his note-book, where the patient's trouble began with a gonorrhoea, followed by spasm of the deep urethra. Calculous spasm occurred, and finally stone passed out, and the patient remained in a condition of chronic cystitis with more or less tenesmus. The subsequent thickening of the bladder walls causes a pressure upon the mouths of the ureters to such an extent as to inflame them. So, with the case reported to-night, it seemed to Dr. Keyes that the above explanation of its cause and development was a possible one, and would bear serious consideration. The case he believed to be one of gonorrhæal cystitis, originating in a gonorrhoea.

Dr. J. W. S. GOULEY said: "I think that one of our Corresponding Fellows has, many years ago, very perfectly and completely described the class of cases to which the one so well described by Dr. Otis belongs. I refer to Dr. Mercier; his explanation is very simple. These troubles, he says, come from persistent chronic urethritis, or rather cervical cystitis following it. The cervical cystitis gives rise to an intense congestion of the capillaries and small blood vessels underlying the mucous membrane. This causes what he calls contracture of the urethro-vesical orifice. He speaks of spasmodic contracture and permanent contracture. The spasmodic contracture follows chronic urethritis, and is curable. The permanent contracture, if left to itself, is incurable. The permanent contracture he calls 'muscular valvule.' It is an impediment to urination

which causes the bladder to contract spasmodically, and expel the residual urine.

These constant contractions will cause an hypertrophy of its muscular coat. The retained urine gives rise to cystitis, the inflammation extends up the ureters, the kidneys become involved, and the patients die after a number of years with pyonephrosis and acute nephritis, superimposed upon chronic nephritis. A patient may have valvular contraction of the urethro-vesical orifice, for a number of years, without suffering more than is due to stagnant urine. That the bladder may contract spasmodically without urine in it I cannot conceive. Neither can I conceive that spasm of the urethra will cause chronic retentions of urine. In such a case as described by Dr. Otis, the obstacle is at the urethro-vesical orifice, and an interesting fact is that, at the post-mortem examination, it is not easy to discover the urethro-vesical valvule. It should be examined from above, and should not be slit along its anterior border. The urethro-vesical orifice should be examined from within. Mercier says that the diagnosis of muscular valvule may be made by the rectangular sound.

I have now a young man under my care, about thirty years of age, with chronic urethritis of a number of years' standing. That gentleman, for five or six years, has been unable to empty his bladder. A few months before I saw him, he was urinating every few minutes. His urine was purulent. He used no instruments to empty his bladder. I asked him to urinate, and he passed an ounce or two of urine slightly purulent. I introduced a catheter and drew off eleven ounces of urine, the last of which was very purulent. The catheter has since been introduced two or three times a day, but the patient is not well, nor will he be slit until the right thing is done. I would refer those interested in the subject to the works of Dr. Mercier. For one, I am thoroughly convinced of the truth of what he states, and I have had a number of cases extending over years which bear out all his statements in connection with this subject.

I have mentioned the last case, reported by Dr. Otis, first, because of its interest. The first case was one of encysted calculus, not very common, but still we find specimens of them in most of our museums. In my first operation for stone I met with an encysted calculus. It was lodged in the anterior portion of the bladder of a child, now a man. Only three weeks ago I operated upon a gentleman who had an encysted calculus in the posterior part of the bladder; perhaps not truly encysted, but incarcerated. I have never seen a specimen of truly encysted calculus, they are imprisoned in diverticuli in the bladder, the mouths of which are more or less large or full, so that perhaps a half or one-third of the face of the stone is presented at the mouth of the cyst. After I had removed four stones from the bladder by breaking, I made a final exploration with the straight forceps, and felt something in the posterior part of the bladder. I had a great deal of difficulty in clearing it, and before so doing lacerated the mouth of the sac, after which I seized the stone, brought it into the cavity of the bladder, broke it, and removed the fragments. The sum total of the detritus weighed six ounces, but I imagine that this gentleman has not long to live. These masses had caused contracture of the urethro-vesical orifice. I believe the ureters and kidneys are already damaged, as those of Dr. Otis' patient were, and as I myself discovered in his case, for he was also under my care at one time. I refused to interfere surgically because I was convinced he was damaged."

Dr. F. H. HAMILTON felt that the profession was greatly indebted to Dr. Otis for his original observations, which, from time to time, have been announced, and which have sometimes startled us, but which, by his

great zeal, have at last, in many instances, come to force conviction upon us. In relation to the point up for discussion this evening, Dr. Hamilton said, "I begin to feel that Dr. Otis is more often right than wrong. I may differ with him in regard to this particular case, but I am convinced that he has given us a great deal of light upon malformations and contractions of the urethra. I wish to say, I can not accept the explanation of my friend, Dr. Keyes. While I agree with Dr. Otis in the main, I feel that his conclusions must in many cases be the exception."

DR. OTIS, in closing the discussion, said that some very interesting points had been brought up. As to the influence of incision of a constricted meatus, without the subsequent use of the sound, he would say, he had on several occasions tried that. I have, he said, in mind the case of a gentleman troubled with frequent urination for a considerable length of time. He passed his urine every fifteen or twenty minutes. He had never suffered from any inflammatory trouble. Upon examination, I found a narrow orifice, which was divided, but no sound was introduced for three days. I was obliged to introduce a catheter to draw off his water. He continued well for a considerable length of time, but the orifice recontracted, which was again relieved by a second operation. I am, however, not at all certain but that, in a considerable majority of cases, the relief is from the introduction of the sound into the bladder. I should not be disposed to quarrel or theorize about this matter, but would simply state that, in these grave cases that have gone on so long, it is worth while to try this experiment—empirically, if you will—to enlarge the meatus and pass a large sound into the bladder. I am satisfied from my experience that many patients will thus be cured and lives saved. This being the case, we can wait for an explanation. Of course, there is a certain amount of theoretical matter connected with this subject, but what I would urge, is that such a simple operation be tried. It can not have any deleterious effect upon the patient. Dr. Hamilton has justly said that a very large proportion of cases do not suffer with contracted meatus, but there is a large class that do so suffer. These I have found associated with debility, in some way induced. These patients have given a history of sexual excesses, and their whole sexual apparatus has been in a condition of reflex disturbance. I have, also, noticed particularly that these men have had gonorrhoea, and most of them a cicatricial deposit therefrom. It is not quite improbable that this cicatricial tissue should entangle nerve-filaments and produce a tonic contracture. However explained, as a matter of fact, division of the meatus, in a very large number of cases, relieves irritation, not alone of the genital apparatus, but the irritation which has extended to the spinal cord and brain. Severe cases of melancholia have thus been relieved. The experiment is one which, it seems to me, is well worth trying.

Upon motion, the Academy adjourned.

NEWS ITEMS.

NEW YORK.

(From our Special Correspondent.)

NEW YORK NEUROLOGICAL SOCIETY.—The annual election of officers of this Society took place at the stated meeting held on April 4. Before the meeting, there was a rumor that a contest for the presidency was likely to occur, which attracted to the meeting a number of medical gentlemen who were not members of the Society. The nominations for president, made at the preceding meeting, in accordance with the By-Laws of the Society, were, Drs. Wm. J. Morton, of New York,

and Landon C. Gray, of Brooklyn. On the evening of the election, a motion was made by Dr. Wm. A. Hammond, and, despite vigorous opposition, was passed, permitting further nominations for officers to be made before proceeding to ballot. Dr. E. C. Spitzka was then nominated for President. Dr. Gray immediately arose and withdrew his name in favor of Dr. Spitzka, stating that he considered the latter gentleman more deserving of the office than himself, on account of the great service he had rendered to neurological science. As soon as Dr. Gray had taken his seat, Dr. Morton arose, and declared that he did not wish to be tardy in recognizing the value of Dr. Spitzka's scientific labors, and, therefore, would also withdraw from the contest in his favor. This left Dr. Spitzka in the field without a competitor.

Dr. Seguin nominated Dr. W. R. Birdsall, and the Society then proceeded to ballot. The first ballot resulted in neither of the candidates receiving a majority of the votes cast. On the second ballot, Dr. Spitzka was elected by a majority of one vote. The interest of the evening centered on the election of the President, and the balloting for the remaining officers passed off quietly, and resulted as follows: First Vice-President, Dr. W. J. Morton; Second Vice-President, Dr. A. D. Rockwell; Recording Secretary, Dr. G. M. Hammond; Corresponding Secretary, Dr. Mary Putnam Jacobi; Treasurer, Dr. E. C. Harwood; Counsellors, Drs. T. A. McBride, E. C. Seguin, L. C. Gray, W. R. Birdsall, and C. L. Dana.

BROOKLYN.

(From our Special Correspondent.)

BROOKLYN EYE AND EAR HOSPITAL.—In the MEDICAL NEWS of March 11 reference was made to the proposed new hospital building for the Eye and Ear Hospital. The negotiations for that building have been completed, and a fine and substantial four-story brick structure has been purchased at a cost of \$47,500. It was formerly occupied as the Juvenile High School, and has a central and eligible location. It can readily be adopted so as to subserve the purposes of the hospital for several years to come, and if an extension shall at some future day be rendered necessary by the growth of the work of the institution, there is ample room for it on the grounds that form a part of the recent purchase. The fund for this object has just been completed, and reaches the handsome sum of \$50,900, headed by a subscription of \$25,000 by Mr. George I. Seney, who was among the early donors to the institution when it was organized in 1868. The annual cost of maintenance has at no time exceeded \$4,000. Over four thousand patients are treated annually, whose visits average five for each patient, or over two thousand visits a year at the present time.

SMALL-POX IN BROOKLYN.—A brief story concerning the first 100 cases of small-pox that came under the observation of the Health Department in 1882:

From January 1, 1882, to February 26, 1882, there were reported to the Department of Health, as small-pox, 112 cases. Of this number, 98 were found, upon examination, to have that disease, and 14 not to have it; 2 cases reported as chicken-pox proved to be small-pox.

Of the 14 cases that were examined and found not to have small-pox, 1 was scarlet fever, 4 chicken-pox, 3 measles, 1 rotheln or German measles, and 5 were cases of skin disease.

Of the 100 who had small-pox, 45 had never been vaccinated, 27 of them died, and 1 is yet under treatment in the hospital. Eight others had pale, indistinct and imperfect marks of vaccination, and were probably never vaccinated, using that term as it should

properly be used. Of them, 4 died, so that we may say that 53 had never been vaccinated, and that 31, or 58 per cent., died.

Of the 47 who had been successfully vaccinated, 6, or 12 per cent., died. Twenty-four of this number were adults who had not been vaccinated since infancy; 3 of them died. Of the 23 who were supposed to be protected by vaccination, 20 had a mild attack of varioloid; 1, aged 3 years, who had been well vaccinated in infancy and again in 1870, died; 2 children, aged respectively 6 and 8 years, members of the same family and having good marks of vaccination, died. The youngest person attacked was 3 months; the oldest, 60 years.

CANADA.

(From our Special Correspondent.)

BODY-SNATCHING IN THE PROVINCE OF QUEBEC.—Among many old-fashioned customs which prevail in the province of Quebec, body-snatching is one not usually mentioned, though it probably prevails more extensively here than in any civilized country. The demonstrator of anatomy at the school using the largest number of subjects, told us that in the past eight years about seventy-five per cent. of the bodies dissected were "knaved out of their graves." The reason of this state of things is readily explained. Though there is a capital Anatomy Act, even more liberal than the British Act, it is virtually a dead letter. The only large public institution from which any number of unclaimed bodies are sent to the schools is the Montreal General Hospital. The Hotel Dieu sends very few; the other large poor-houses and asylums none at all. Most of these institutions are under the care of religious sisterhoods, and the burial of the dead is among their chief works of mercy. The present inspector of anatomy has other more important duties to attend to, so that the legitimate supply of material is wholly inadequate. The business of supplementing it is chiefly in the hands of the French Canadian students who know the outlying villages and not unfrequently have accomplices. Owing to the frozen state of the ground the bodies during the winter months are placed in vaults, so that the students sometimes get off with four or five at once. At \$25 a piece, the temptation is strong to impecunious students, and the risk is very slight. Though there have been many arrests in the past few years, the perpetrators have usually escaped with a small fine. Two notorious cases this winter have aroused public attention to the matter, and a new bill is before the House of Assembly at Quebec, providing that the heads of institutions shall notify the schools on the death of a friendless individual, and shall hand over the body of the same to the first applicant. It is to be hoped that this will help to do away with the present disgraceful condition of affairs.

NUNS AS PHARMACEUTISTS.—The dispensing of the large Roman Catholic institutions in the province of Quebec is exclusively in the hands of the "sisters," and no more beautifully arranged dispensaries are to be seen than those of the Hotel Dieu and the Grey Nunnery in Montreal. In the first-named institution the sisters in charge are skilled pharmacists, and prepare numerous nostrums which are highly esteemed by the "habitants." They have also published an extensive volume on pharmacy and on the properties of drugs. The system has its disadvantages; we have been told by more than one physician at the Hotel Dieu that liberties were taken with prescriptions, and particularly where expensive drugs were ordered, there was sometimes a doubt as to the accuracy of the amount.

EDINBURGH.

(From our Special Correspondent.)

EDINBURGH UNIVERSITY.—After considerable delay, the Queen has appointed Edwin Ray Lankester, M.D., F.R.S., Professor of Anatomy and Comparative Zoölogy in University College, London, to the chair of Natural History in the University of Edinburgh, rendered vacant by the resignation of Sir Wyville Thomson, who has since died. Professor Lankester is the son of the well-known Dr. Edwin Lankester, and although thirty-five years of age, has for some years occupied a distinguished position among our prominent zoölogists. He is the editor of the *Journal of Microscopical Science*, and is himself an active contributor to this and many of our scientific journals and societies. Among his principal works are, "A Monograph of the Fossil Fishes of the Old Red Sandstone," "Comparative Longevity," and "Contributions to the Developmental History of Mollusca." He is also the editor of several works in natural science, amongst others, a translation of Hæckel's "History of the Creation." He is a naturalist, who has also largely cultivated the physiological part of zoölogy as distinguished from the mere morphological. His name was brought prominently before the country in 1876, in having instituted a legal prosecution of the American spiritualist, Slade, one of whose seances he had attended. He proved to the satisfaction of the court that so-called spiritualism, as practised by Slade, was a fraud, and he procured the conviction of the offender.

VIENNA.

(From our Special Correspondent.)

LOCAL THERAPY OF VARIOLA VERA.—Dr. A. Kupferschmied, of Murzschlag, in the recent epidemic, in Vienna, employed with gratifying success the following local treatment for the facial exanthem. As soon as the facial eruption had reached the pustular stage, a mask cut out of gutta-percha paper was covered with four or five layers of iodoform gauze, well saturated with glycerine, and applied to the face. The 50 per cent. iodoform gauze is selected, so that the penetrating odor of the drug shall combat that of the disease. Ordinary gauze may be used instead, if iodoform is disagreeable to the patient.

The following advantages are claimed for this method of treatment.

(1.) It surpasses other methods of smearing the face in cleanliness, and therefore in healthfulness.

(2.) It macerates the pustules, exercises a favorable influence upon the collateral œdema, and cuts short the following stage. The stage of suppuraction and of crust-formation, which is the most troublesome and disgusting to the patient's attendants, is effectively abbreviated by this therapy. "I was often astonished," says the doctor, "to find under the mask no trace of those dirty, brown scabs which usually form under every other method of treatment."

(3.) The loss of skin-substance is minimal.

Dr. Hans Hebra, who has achieved great local celebrity in treatment of variola vera, bases his treatment upon the early removal of the covering of the pustule, causing, by this means, drying of the contents, and preventing resorption of pus. His purpose is carried into execution (1) by the employment of the continued bath from the first day of fever; (2) by more gradual maceration. The latter method is more extensively used in private practice, as there is a prejudice against the continued bath.

In this method, the patient in the morning is well soaped and rubbed, and remains in an ordinary bath one hour. He is then enveloped in sheets, kept satu-

rated with water until the next morning, when he takes another bath. The same general plan is employed for the facial exanthem. Prolonged maceration, with any innocuous ointment, as soon as the first efflorescence appears, with intent to prevent separated efflorescences, is practised. Usually, unguentum diachyli is used.

PERSONAL.—Klebs has left Prague, the seat of his greatest scientific labor for the past nine years, for Zürich.

Billroth, accompanied by two assistants, Drs. Wölfler and Gersuny, left Vienna in the early part of the week for Bordeaux, to perform his operation of gastric-resection upon the person of a distinguished citizen of that city.

Chvostek, Drasche, and Schrötter are nominated as candidates for the chair made vacant by Duchek's death.

Eppinger will probably succeed Klebs in Prague. Chiari, thrown out of his position in Vienna by the election of Kundrat to the Chair of Pathological Anatomy, is expected to go to Innsbruck. Weichselbaum is named as Kundrat's successor in Graz.

Dr. Emil Zuckerkandl, Extraordinary Professor of Anatomy in Vienna, has been appointed Ordinary Professor of Anatomy in Graz. Zuckerkandl's brilliant anatomical career is the subject of much comment. His earlier anatomical studies were directed by Hyrtl and Rokitsansky, personally. His first more important work, upon the skull obtained in the Novara expedition, is familiar to Americans. Within the last two weeks, the first volume of a great anatomical work upon the nose, has appeared. As a teacher, he is one of the most attractive in the Vienna medical school.

Upon March 14, in Trieste, Dr. Sampeo, a Brazilian, and Professor in the Poliklinik, in Rio, committed suicide by shooting himself. The bullet penetrated the left ear and lodged in the brain. The victim survived eighteen hours. Dyspeptic melancholia is assigned as the motive of the act.

Prof. Bamberger recommends Kretschy, a former assistant, as Duchek's successor.

THE NEW YORK CODE OF ETHICS.—At a meeting of the Fountain County (Ind.) Medical Society, held on the 6th of April, 1882, Dr. George Rowland introduced the following preamble and resolutions, which were unanimously adopted:

WHEREAS, We, the members of the Fountain County Medical Society, have noticed, with deep regret, that the Medical Society of the State of New York, at its recent meeting in February last, established a new code of ethics which is in direct conflict with the code of ethics of the American Medical Association; therefore

Resolved, First, That all the changes and mutilations made by the Medical Society of the State of New York in the laws and ethics established by the American Medical Association are unnecessary, unauthorized, unwise and mischievous, and deserve the condemnation of all good men in the medical profession.

Second, That the asserting of the right to "meet in consultation legally qualified practitioners of medicine," without further qualification, is directly at war with the code of ethics established by the American Medical Association, and has a tendency to break down the barrier between the learned and scientific physician and the vain and ignorant charlatan. We all know that amongst the "legally qualified physicians," of every State of the Union, are to be found the most arrant quacks and mountebanks, and that by thus giving them this equality, we thus give them countenance and respectability and enable them to ply their nefarious vocation with injury to the public.

Third, That the code of ethics of the American

Medical Association is above State organization, and that all physicians who are members of the American Medical Association, or who belong to societies in affiliation with that body, are bound by its obligations and restrictions and amenable for violation of its laws, and it is unwise to disturb a custom which has been approved by the wisdom and experience of ages.

Fourth, That, as the action of the Medical Society of the State of New York is without a precedent for this strange departure, we trust it may have no following, and that we deeply sympathize with the noble minority who fought against the cruel action of the majority.

At a meeting of the Lancaster County (Pennsylvania) Medical Society, held April 5, Dr. John L. Atlee called attention to the recent action of the State Medical Society of New York in altering the code of ethics adopted by the American Medical Association, which code is obligatory upon the members of all State and county medical societies in affiliation with the American Medical Association.

After some prefatory remarks, he read to the society, from THE MEDICAL NEWS of March 25th, the resolutions of the Montgomery County, Alabama, Medical Society, introduced by Dr. Wm. D. Baldwin, ex-President of the American Medical Association, condemning the conduct of the New York State Medical Society at its meeting in February last. Dr. Atlee concluded his remarks by moving the adoption of the Alabama resolutions as the sense of this society. After further remarks by Drs. Carpenter, I. L. Ziegler, President of the Pennsylvania State Medical Society, and Dr. Craig, the preamble and resolutions were unanimously adopted, and the society's action was ordered to be sent for publication in THE MEDICAL NEWS.

THE PUBLIC HEALTH.—The following data, not hitherto reported, are given for the week ending April 1. The returns for the week show 5 new cases of *small-pox* in Brooklyn; 17 deaths in New Orleans; 3 each in Hudson Co., N. J., and Richmond, Va.; 2 in Omaha, Neb.; and 1 each in the District of Columbia and Detroit. From *cerebro-spinal meningitis*, 2 deaths each in Hudson Co., N. J., Buffalo, and Detroit; and 1 death each in Salt Lake City and the District of Columbia. There were 12 deaths from *croup* in Brooklyn; 4 in Buffalo; 3 in Hudson Co., N. J.; 2 in Detroit; and 1 in the District of Columbia. *Diphtheria* caused 15 deaths in Brooklyn, the same as in the preceding week; 7 in Hudson Co., N. J.; 5 in Detroit; 4 in Buffalo; 3 in Davenport; 2 in New Orleans; and 1 each in Charleston and Vicksburg. From *typhoid fever* there were 3 deaths in Hudson Co., N. J.; 2 each in Buffalo, Detroit, and New Orleans; and 1 each in Brooklyn, the District of Columbia, and Richmond. From *scarlet fever*, 26 deaths in Brooklyn; 8 each in Hudson Co., N. J., and Buffalo; and 2 each in Detroit and Vicksburg. From *measles*, 7 deaths in Brooklyn; 3 in Hudson Co., N. J.; 2 in Buffalo; and 1 in Detroit. From *whooping-cough*, 3 in Brooklyn; and 1 each in Buffalo, and Shreveport, La. *Consumption* caused 34 deaths in Brooklyn; 14 each in New Orleans, and Hudson Co., N. J.; 4 each in Buffalo, Detroit, and Richmond; 12 in the District of Columbia; and 1 each in Vicksburg, Omaha, Neb., and Shreveport. There were 32 deaths from *pneumonia* in Brooklyn; 23 in Buffalo; 17 in Hudson Co., N. J.; 16 in the District of Columbia; 5 in Richmond; 4 each in New Orleans and Detroit; 2 each in Vicksburg and Omaha; and 1 in Shreveport, La.

For the week ending March 25, there were reported in San Francisco, 2 deaths from cerebro-spinal meningitis; 4 from diphtheria; 3 from typhoid fever; 9 from measles; 2 from scarlet fever; 20 from consumption; and 18 from pneumonia.

For the week ending April 8, the principal causes of death in a number of prominent places throughout the country were as follows:

Small-pox.—This disease is on the increase in Cincinnati, where 50 deaths occurred during the week. This is an increase of 13 over the number reported the preceding week, and the highest number reached during the present epidemic. It is also on the increase in New Orleans, where the mortality for the week was 17. There were 8 deaths in New York City; 11 in Philadelphia; 13 in Chicago; 11 in Pittsburg, with 17 new cases; 1 in Boston, and 2 new cases; 2 in Memphis; and 1 each in Louisville and Camden, N. J. The epidemic still continues in South Bethlehem, Pa. Up to the 10th of April there have been reported 293 cases, of which 82 have died. The population of the town is about 5,500. A number of new cases have been reported in Bethlehem proper during the week.

Cerebro-spinal Meningitis.—New York City reports 5 deaths; Chicago, 3; Louisville and Indianapolis, each 2; and Philadelphia, Boston, Cincinnati, Providence, New Haven, and Nashville, each 1 death.

Croup.—This disease caused 26 deaths in New York City; 11 in Philadelphia; 2 each in Boston and Louisville; 7 in Chicago; and 1 in Cincinnati.

Diphtheria.—There was an increase in the number of deaths from diphtheria in Boston, and a very marked increase in the number of new cases (32). There were fewer deaths reported in New York City, Philadelphia, and Cincinnati. The returns for the week are as follows: New York City, 38 deaths; Philadelphia, 11; Chicago, 11; Boston, 10; Somerville, Mass., 5; Cincinnati, 2; and Providence, R. I., Indianapolis, and Dayton, O., each 1 death.

Scarlet Fever.—A decrease in the number of deaths from this disease is noted this week. The following is the record: New York City, 65 deaths; Philadelphia, 5; Boston, Cincinnati, and Cleveland, 2 each; and Portland, 1 death. Six new cases were reported in Boston. At Cressona, a small place in Pennsylvania, it is reported that malignant scarlet fever has made its appearance, and caused within a few days six deaths.

Typhoid and Typhus Fevers.—There was only 1 death reported from typhoid fever in New York City; 16 in Philadelphia; none in Boston, but 7 new cases; 6 in Cincinnati; 3 in Mobile; 2 each in Dayton, O., Indianapolis, and Memphis; and 1 each in Portland, Providence, New Haven, Nashville, and Augusta. From typhus fever, 6 deaths were reported in New York City, an increase of 3 over the preceding week.

Malarial Fever.—Malarial fever caused 12 deaths in New York City; 3 in Philadelphia, and 1 in Louisville.

Measles and Whooping-cough.—Neither of these diseases are very prevalent. In New York City, there were 29 deaths from measles, compared with 44 in the preceding week; 11 in Chicago; 8 in Philadelphia; and 2 in Louisville. Whooping-cough caused 13 deaths in New York City; 3 in Chicago; 2 each in Philadelphia and Boston; and 1 in Providence.

Consumption and Pneumonia.—The deaths from consumption were as follows: New York City, 109, the same as last week; Philadelphia, 64; Boston, 33; Cincinnati, 20; Chicago, 20; Louisville, 11; Pittsburg, 5; Providence, 5; Memphis, 5; New Haven, 4; and Dayton, 3; Portland, Indianapolis, Nashville, and Jacksonville, each 2 deaths. From pneumonia there were 84 deaths in New York City; 54 in Philadelphia; 33 in Chicago; 19 in Boston; 17 in Cincinnati; 9 in Pittsburg; 8 in Providence; 6 in Louisville; 5 in New Haven; 3 in Indianapolis; 2 in Dayton, and 1 each in Portland, Nashville, Memphis, and Augusta. The deaths from consumption have generally fallen off. Those from pneumonia have also shown the same tendency, except

in Philadelphia and Cincinnati, where the increase was very pronounced.

HEALTH IN MICHIGAN.—The bulletin of the Board of Health states that for the week ending April 1, 1882, the reports indicate that rheumatism, inflammation of bowels, and neuralgia have increased, and that diarrhoea, scarlet fever, tonsillitis, consumption of lungs, and membranous croup have decreased in area of prevalence. Small-pox is reported at 6 places, as follows: in Everett township, Newaygo Co. (3 cases), and at Grand Rapids, March 28; at Milford (4 new cases), March 30, and one new case reported April 5; in Geneva, Van Buren Co., at Battle Creek (2 new cases), and at Detroit (2 cases), April 1, 1882.

VACCINATION.—In the German army from 1873 to 1879 there were only 96 cases of variola, and no deaths. But this is explained by the fact that all the men incorporated are vaccinated five or six times.

PERSONAL.—The honorary degree of Doctor of Medicine has been conferred by the College of Professors of the University of Vienna on Herr Ludwig, the professor of chemistry in the university, in recognition of his eminent services to science and to education.

MEDICAL LITERATURE IN JAPAN.—The return of works licensed to be printed during the past two years by the Japanese Department of the Interior shows that last year there were 267 works on medicine, against 229 the previous year. Many of these books are translations or adaptations of European or American works.—*Med. Times and Gaz.*, March 25, 1882.

WHAT IS SAID OF THE NEW YORK CODE OF ETHICS.

The New York *Medical Record* and the *N. Y. Medical Journal* both favor it, of course. With these exceptions, we have not seen a single journal—from north, south, east, or west—that did aught but condemn the action in no uncertain sound. And these utterances are the true index of the feelings of the profession. Fifty-two doctors at Albany, reckless of honor but greedy for gold, undertook to sell out the regular profession; but only succeeded in selling themselves—and very cheap at that. The wise Confucius says: "He who seeks gold more than honor, is likely to lose both gold and honor." The fees which those men hoped for they will not get, while the honorable name which has been heretofore accorded to them is theirs no longer.—*Ohio Medical Journal*, April, 1882.

It is with considerable satisfaction that we record the unanimous disapproval and condemnation of the action of the New York State Society by the entire medical press. It is a powerful earnest that honorable medicine will not allow itself to be tainted by affiliation with humbuggery in any of its protean shapes. We hope the voice of every honorable practitioner will be raised in strong denunciation of this unheard-of action of an old society, and that the tide of condemnation will soon be so great as to turn our erring brethren of the Empire State from their fatal course.—*Nashville Journal of Medicine and Surgery*, April, 1882.

By the action of the New York State Medical Society, there is a complete surrender to homœopathy by the members of that Society. These men have been crying out "quacks," "quacks," when speaking of homœopathy for years, and "turning up their noses" in contempt; but now in their Society they style them "legally qualified practitioners of medicine," and assert the propriety of consulting with them. Oh, consistency, thou hast not thy dwelling-place in man! To-day he exclaims with indignation, "Is thy servant a dog that he

should do such a thing?" and to-morrow he proceeds deliberately to do it, and takes merit to himself for doing it. We have nothing to say against homeopaths, and never had. We respect the honest homeopathist who sincerely believes in his dogmas, but we have little respect for the majority of the men of the New York State Medical Society.—*Cincinnati Medical News*.

In effect, it approves of any of the members of that Society, and others in affiliation therewith, when they meet in professional comity persons of the class considered heretofore as outlaws, such as the legally qualified and avowed Thomsonians, Electropsychic healers, faith-conjurors, and all the "pathists" who publish some narrow dogma as the sole rule of their practice. As if to bolster this illogical provision with the sanctions of heavenly charity, there follows a clause which intimates that certain emergencies may arise when a doctor who insists upon the reasonableness and propriety of the rule of life adopted by his guild may be open to the charge of inhumanity. . . . There is small hazard in the conjecture that this Society will take the stand that we wrong ourselves, and worse still, wrong society by countenancing these pretensions.—Dr. J. W. Holland, in *President's Address before the Kentucky State Medical Society*, April 5, 1882.

Far from being in the wrong, the profession of this State have taken a much-needed step in advance. . . . We repeat, that the Medical Society of the State of New York has done nothing of which it may be ashamed. It can take nothing back, so far as freedom of consultation is concerned. The stand taken is an eminently proper one, and we hope it will be persistently maintained, even at the risk of non-representation in the American Medical Association. It will, in any event, be only a question of time for the Association itself to follow the example of the Society of this State.—*Medical Record*, April 8, 1882.

NOTES AND QUERIES.

DELIVERY BY CRANIOTOMY.

To the Editor of THE MEDICAL NEWS.

SIR: After a perusal of the statement appended to the paper on "Caesarean Section," by Dr. McClellan, in the *American Journal of the Medical Sciences* for April, 1882, I feel encouraged to send you an account of two cases which occurred in my practice. I was called about 3 o'clock P.M., in the fall of 1869, to a colored woman near Charlotte Hall, who, it was said, had been in active labor since some time during the previous day, and was requested to deliver the after-birth. A child was then lying dead on a table in the room. I found, upon examination, another child, with an arm, the head, and a foot forced, and held by powerful uterine contractions deep into the excavation. After the various manipulations advised for such a procedure were resorted to, considering that the woman was rapidly passing into a state of hopeless exhaustion, I told her husband and two white women who were present that the only way to effect a delivery was by opening the child's head and turning it around. Having no instruments, I readily cut through a fontanel with the large blade of a pocket-knife, which was furnished by the man; and then, breaking up the brain and scooping it out with my fingers, I seized the head between my fingers and thumb and readily compressed it. I then drew down the prolapsed foot, and tied a strong ligature around it, and gave this to the midwife to prevent this foot from slipping up while I secured the other one. The woman made a good recovery, and afterwards gave birth to twins.

To the second case (also colored): I went about 8 o'clock P.M., June 30, 1878. I found the woman with strong pains; child's arm and head deep deeply engaged and held as if in a vice. After trying for an hour or so to make a favorable change, the woman went into a convulsion, when I proceeded to deliver as on the previous occasion. She also readily recovered with no accident, excepting difficulty in urinating for a few days. I used a considerable amount of force in making traction by the feet in both of these cases.

Yours, respectfully,

WILLIAM A. MARBURY, M.D.

AQUASCO, MD.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 4 TO APRIL 10, 1882.

GREENLEAF, CHAS. R., *Major and Surgeon*.—Relieved from duty in Department of Dakota, to proceed to New York City, and, on arrival, report by letter to the Surgeon-General.—S. O. 78, A. G. O., April 5, 1882.

WOODHULL, A. A., *Major and Surgeon*.—Now awaiting orders. To report in person to the commanding officer of the recruiting depot, David's Island, New York Harbor, for duty at that post.—S. O. 78, C. S., A. G. O.

WILLIAMS, JNO. W., *Major and Surgeon*.—Relieved from duty in Department of the Missouri, to proceed to Washington, D. C., and report to the Surgeon-General.—S. O. 78, C. S., A. G. O.

WATERS, W. E., *Major and Surgeon*.—Relieved from duty in Department of Texas, to proceed to Washington, D. C., and report to the Surgeon-General.—S. O. 78, C. S., A. G. O.

JAQUETT, G. P., *Major and Surgeon*.—Relieved from duty at David's Island, New York Harbor, to proceed to his home and report by letter to the Surgeon-General.—S. O. 78, C. S., A. G. O.

BROWN, J. M., *Major and Surgeon*.—Relieved from duty in Department of the Missouri, to proceed to Cincinnati, Ohio, and, on arrival, report by letter to the Surgeon-General.—S. O. 78, C. S., A. G. O.

CLEARY, P. J. A., *Captain and Assistant Surgeon*.—Relieved from duty in Department of the East, and, on expiration of his present sick leave of absence, to report by letter to the Surgeon-General.—S. O. 78, C. S., A. G. O.

CRONKHITE, H. M., *Captain and Assistant Surgeon*.—Granted leave of absence for four months, from June 1, 1882.—S. O. 80, C. S., A. G. O.

CARVALLO, CARLOS, *Captain and Assistant Surgeon*.—The extension of his leave of absence on surgeon's certificate of disability granted him in S. O. 256, November 12, 1881, from A. G. O., is still further extended six months on account of sickness.—S. O. 80, A. G. O., April 7, 1882.

LAUDERDALE, J. V., *Captain and Assistant Surgeon*.—Having reported by letter to these headquarters, is assigned to duty at Fort Sully, Dakota Territory, to which post he will proceed and report for duty.—S. O. 47, *Department of Dakota*, March 27, 1882.

MOSELY, E. B., *Captain and Assistant Surgeon*.—Relieved from duty in Department of the Platte, to proceed to New York City, and, on arrival, report by letter to the Surgeon-General.—S. O. 78, C. S., A. G. O.

MAUS, L. M., *Captain and Assistant Surgeon*.—Relieved from duty at David's Island, New York Harbor, and to report in person to the Commanding General of the Department of the Missouri for assignment to duty.—S. O. 78, C. S., A. G. O.

KILBOURNE, H. S., *Captain and Assistant Surgeon*.—Relieved from duty in Department of the East, and to report in person to the Commanding General of the Department of Dakota for assignment to duty.—S. O. 78, C. S., A. G. O.

TAYLOR, M. E., *Captain and Assistant Surgeon*.—Relieved from duty in Department of the Missouri, to proceed to St. Louis, Mo., and, on arrival, report by letter to the Surgeon-General.—S. O. 78, C. S., A. G. O.

SPENCER, WM. G., *Captain and Assistant Surgeon*.—Granted leave of absence for four months, with permission to apply for an extension of two months.—S. O. 80, C. S., A. G. O.

CORBUSIER, W. H., *Captain and Assistant Surgeon*.—Now awaiting orders. To report in person to the Commanding General of the Department of the East for assignment to duty.—S. O. 78, C. S., A. G. O.

CUNNINGHAM, T. A., *Captain and Assistant Surgeon*.—Granted leave of absence for fifteen days, to take effect on arrival of Assistant Army Surgeon Actand at Mt. Vernon Barracks, Alabama.—S. O. 40, *Department of the South*, April 3, 1882.

DAVIS, W. B., *Captain and Assistant Surgeon*.—Now awaiting orders. To report in person to the Commanding General of the Department of the Platte for assignment to duty.—S. O. 78, C. S., A. G. O.

CHERBONNIER, A. V., *Captain and Medical Storekeeper*.—Granted leave of absence for four months, on surgeon's certificate of disability.—S. O. 77, A. G. O., April 4, 1882.

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked. Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.